using all the information obtained from the customer throughout the process.

The proposal and presentation modules 412 and 414 are integrated with the rest of the system via the event manager 401A. The system recognizes key sales events as described above. For example, the generation of a proposal may automatically generate a follow-up to-do list in the self-management portion of the system. Additionally, the system may recognize the significance of proposal generation and note in the lead generation component 102 the name of a customer and the type of product or service the customer is interested in. This information can be used to generate automatic mailings to the customer about new related products.

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Fig. 5 illustrates the subcomponent modules of the order management component 106. The order management component 106 includes an order submit module 502, and order status module 504, a change order module 506, and order acknowledgment module 508, etc. The order management component is integrated into the system to support the creation and submission process, including configuration and pricing, at the point of sale. In this manner, a salesperson can use the system to automatically convert a customer "solution" to a purchasing need, developed using the time with customer component 104, into an order. This ensures that what was sold to the customer is actually ordered and subsequently delivered. Moreover, costs are reduced as administrative functions and errors are removed from the process. Customers are more satisfied because they receive what they ordered. Moreover, the order management component 106 allows the salesperson to directly prepare supplemental orders and changes. result customers are able to deal directly with the salesperson throughout the entire sales process, increasing customer satisfaction.

The order creation and submittal module 502 is provided as part of the order management component to facilitate creation and submission of an order by adding any addition information to a proposal or quote required by the company's order fulfillment process such as "bill to", "ship to", deliver instructions, etc. All information previously entered via the other components and modules of the system, as relevant to the order, will automatically be reflected in the order creation and submission module 502. For example, product and option data for the order are obtained from the configuration module 406 of the time with customer component 104 to prevent errors in the order The module may prompt the salesperson for all process. additional required information and provide error checking and acceptance criteria to ensure adequate customer solutions are provided. The order acknowledgement module 508 receives an order acknowledgement which is passed back to the user through the communications component 118 in the back office system 200.

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An order status module 504 is provided to allow the salesperson to inquire and monitor the status of an order at any time throughout the order process. The module may include facilities for automatically generating a periodic report for the salesperson to monitor the status of outstanding orders.

The change order module 506 allows the salesperson to request changes to orders that have already been submitted to the manufacturer. This module may be integrated via the back office system 200 with the enterprise order fulfillment process. Product and option data for a revised order may be provided from the configuration module 406 to prevent errors. For example, the configuration module 406 can be used when a change is requested to ensure that the change to the order does not effect other components of the ordered product. This information may then be directly

passed to the change order module 506 of the order management component 106 for preparation and submission of a change order. The user is, again, prompted for all required information. Alternatively, the change orders may be produced directly in the change order module, with the 506 change order module being integrated to configuration module 406 automatically checking the changed configuration for compatibility. Error checking and acceptance criteria can be applied to the changed order by the system to ensure adequate customer satisfaction.

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The event manager 201A recognizes order events and initiates appropriate action. For example, the event manager may recognize an order for a customer and pass the customer name and product ordered to lead generation component 102. Like the proposal, the order process may indicate a customer's potential interest in other related products. The event manager will further note the context in which a customer is linked to a product. A customer who has ordered a product is different than one who merely requested a proposal. While both information is useful, the event manager 201A recognizes the context in which the information was obtained and can automatically generate different responses based on the context. also determine by accessing customer manager may information databases whether the order is submitted by an existing customer on a first time purchase. If the order comes from a first time purchase, a letter can be automatically generated which reflects the new customer status.

Fig. 6 illustrates the subcomponent modules of the customer retention component 108. The customer retention component 108 includes a customer satisfaction module 602, a newsletter and mailings module 604, a customer contact module 606, etc. The subcomponent modules provide an integrated system for retaining customers as future, repeat

Two key aspects of the customer retention customers. component 108 are provided in the systems planning capabilities and information sharing abilities. Using the customer satisfaction module 602, the salesperson, possibly with the assistance of the customer, develops a customer This allows the sales person to manage business plan. sales activities as it relates to the customer's business The information obtained in developing the plan using the customer satisfaction modules 602 may also be referred to by other components and modules as desired. For example, if the salesperson is working with the customer to develop a new sales solution to a customers needs using the time with customer component, as a solution is specified the system may automatically refer to the customer's business plan to determine if the proposed solution is consistent with the plan. The satisfaction module 602 assists the salesperson identifying key steps, deliverables, schedules, purchase goals, and key events for the upcoming year or period. modules also facilitates management of promotions which are set up between the salesperson and the customer.

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The customer satisfaction module 602 is connected to the event manager 201A for integration with the self management component 110. The self management component 110 provides the functionality for the user to track and schedule the customer retention activities and objectives established using the customer satisfaction module 602. It is noted that the event manager 201A will recognize operations carried in the customer satisfaction module 602, the context in which the plan is developed and may direct the self management component 102 to automatically insert tasks and to do lists to assist the salesperson in following the plan.

The newsletters component 604 provides a mechanism for the system to generate and mail out newsletters to customers based on the information about the customer available within the databases of the data component 116. For example, the event manager may automatically recognize an event which occurs during the sales process with a potential customer, and notify the newsletter module 604 of the customer retention component 108 to place the particular customer on a newsletter mail out list.

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The customer contact module 606 assists the salesperson in remaining aware at all times of any contact or activity between a customer and the company such as warranty, service, marketing responses, and customer support. The event manager 201A, recognizes such events within the system and notifies the customer contact module 606. The salesperson may use the customer contact module 606 to review such contact with a particular customer. Information collected through other enterprise systems may also be transferred to the sales system to monitor ongoing customer satisfaction and new sales opportunities on the basis of information gathered via the other enterprise system.

Fig. 7 illustrates the subcomponent modules of the self management support component 110. As described above, the self management support component 110 provides tools to the salesperson to use throughout the sales process in conjunction with the core components of the sales process. The self management support component 110 includes a contact management module 702, an opportunity management module 704, a calendar module 706, a "to-do" list module 708, a forecast module 710, and a time management module 711, each coupled to a scheduler module 712. The scheduler module 712 is coupled along with an objective management module 714 and other self management modules to the event manager 201A.

Through the event manager 201A, the subcomponent modules of the self management component 110 can be

accessed as needed while using other components of the system. For example, the opportunity management module 704 can be accessed by the salesperson to assist in the time-consuming tasks of prioritizing opportunities, managing the sales process, communicating results, forecasting, reviewing progress, managing customer information and analyzing markets. As an integrated system, each of these task may be used as needed to effectively self manage the salesperson's time. Due to integration with the sales management component 112, the information can also be reviewed by the sales management team to help monitor the sales process and ensure that objectives are met.

Each of the subcomponent modules of the self management component 110 are optimized for use with other modules of the sales system. The self management component is used by the salesperson to manage opportunities, objectives, territory information, contacts, accounts, schedules, goals The self tasks. management module performs interactively with each of the other components, for example, with the time with customer and order management components to recognize events and process information without requiring reentry by the salesperson. The self management component further supports team selling, workgroups and workflow environments. It further provides an intuitive solution for managing account relationships, sales processes and information opportunities and A flexible data architecture is used which management. allows information to be presented the way the user needs the information for a particular opportunity. integration with word processing software is provided to develop correspondence, access templates and create unique The self management component also supports e-mail and fax functions for the rapid distribution of information and correspondence to customers. By way of

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example, various subcomponent modules of the self management component are described below.

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The contact management module 702 is provided to assist salesperson in receiving, sending, maintaining and managing information related to contacts and organizations (e.g. companies, groups, firms, etc.). The contact management module utilizes a relational data architecture which supports the ability to track and manage unique relationships of contacts, channels, A user interface which provides rapid organizations. access to account and contact information is incorporated into the contact management module 702. An integrated communication facility provides the ability to receive leads from other data sources such as telemarketing (i.e. from the lead generation component 102) workgroups. The contact and organization information, as updated using the contact manager module 702, is utilized by other components to avoid reentry by the user. Information shared by the back office system 200 and enterprise system 209 provides account specific historical further customizable by the system is The salesperson providing user-definable fields that allow personal tailoring of information managed in the module.

A time management module 711 is also provided in the self management component 100. The time management module 711 allows the user to manage their schedule and tasks. Integration of the time management module with other modules and components of the system allows the system to enhance the salesperson's ability to manage multiple tasks and events. Activated process steps in the objective management module 714 (described below) are automatically scheduled for action in the time management module 711. The time management module supports multiple calendar views including daily, weekly, monthly views. A user interface having the ability to drag and drop tasks to a date for

scheduling is provided. The time management module also provides direct integration with an e-mail system to receive or send group scheduling, requests and meeting arrangements. A task management subcomponent of the time management module 711 provides the capability to implement group tasks by project, priority, account and dates.

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objective management module 714 allows salesperson to assign a process (i.e. a series of steps) to a given sales objective. The objective management module 714 provides a structured sales process for the salesperson by integrating the best knowledge and expertise of an organization's best selling strategies. The salesperson is able to view guidelines and recommendations for each step and recommendations to overcome possible obstacles to move a prospect through a sales cycle. Critical sales information and opportunity status is communicated between the sales personnel and management by the integration of the objective management module of the self management component 110 and the sales management component 112.

Using the objective management module 714 sales process steps and guidelines may be uniquely developed for each type of sales opportunity. The module may include a checklist feature that allows the user to utilize forms and lists to gather a uniform set of information needed for each opportunity or account profile. The salesperson may customize or insert additional process steps for a given opportunity. The system may automatically calculate the probability of closing the sale with the date and value of each opportunity and process and consider both the sales status and the customer's buying status. The integration with other components of the system, allow the salesperson to quickly access opportunity, activity and value. integrated automated support of opportunity management is facilitated by recognition of key opportunity events such as proposal creation and order entry via the event manager

201A, or automatically initiate other actions within the system.

A forecasting module 710 is also provided within the self management component 110. The forecasting module 710 provides functional and product forecast information to the salesperson related to sales, revenue, commission and profit sorted by accounts or products identified in the sort criteria. The forecasting capability provides information to the salesperson to enhance planning and prioritization of efforts. Integration with the sales system allows the forecasting module 710 to present information based on model, components, customer, time, and other criteria.

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The forecasting module 710 also provides salesperson with automatic reporting capabilities including win-loss ratios, actual versus goals, commissions, period-to-date status. Opportunity status may be presented on a system calculated or a user estimated basis. utilizes data for closed sales, data module opportunities with a stated prediction of close, or data for a combination of both as received from other components of the system to generate forecast reports. The module produces graphical and tabular displays of reported Forecast related data is made available for information. use by enterprise information management systems by the forecast module.

Fig. 8, illustrates the subcomponent modules of the training component 114. The training component 114 includes a system training module 802, a product training module 804, a skills training module 806, etc. The completely integrated system allows salespersons to sell and train with the same system. The integrated on-line training, using the same system as the salesperson uses in the field eliminates traditional expensive classroom training and provides. Moreover, the combination of the

subcomponent modules, facilitates integrated sales training in three key areas: product knowledge, sales skills and system usage. The integration also allows the salespeople to follow a self-paced routine to build their expertise using live data and functionality.

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Each of the training modules 802, 804 and 806 are computer based training modules which present pre-built computer-based training courses to the user and which gather completion data for training administration and status reporting. The modules access, reformat and present product data from the common database. Data can include, for example, specifications, graphics, multimedia and competitive information. The ability of the computer-based training to access the actual working modules of the sales system provide a familiar working interface to the user. The training component 102 is further supported by a training administration module 810, a training management module 812, and a certification module 814. The training management module 812, illustrated in Fig. typically reside in the sales management component 112 of the system. The training management module is used by the system to report, monitor and coach the salesperson during training. Training events carried out by the salesperson are recognized by the event manager 201A, and provided to the training management module 812.

As described above, the training component 114 is integrated to the other components of the sales system to provide a common user interface and a common platform for training and selling. Common data and media (graphics, video, etc.) utilization with the time with customer component 104 provide common reference material and reduce The training administration local storage requirements. module 810, typically provided when in the self management component 110, is further integrated to allow the user to own training and self-improvement manage their

requirements. Integrated with the modules of the time with customer component 104, the certification module 814 certifies salesperson for use of the system for particular products lines or data and can require certain pre-determined levels of competency before access to the modules within the time with customer component 104 is granted.

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The training administration module 810 provides an overview of the user's employee development requirements required training events), the associated certification tests and the recommended sequence of progression. This module controls access to the user's individual training events based upon prerequisites and the individual's completion of those prerequisites determined by the certification tests carried out in the certification module 814. It also provides a link to the training and test engine of the system.

The training administration module 810 is integrated with the objective management module 714 of the self management component 110. In this manner, the module allows the assignment and tracking of personal training objectives and schedules. The training administration module 810 identifies both required and optional training events which may be driven by the salesperson's actual usage of the system. The system may automatically notify the user of scheduled training events or performance evaluations and will automatically update the user's time management module 711 of the self management component 110.

The certification testing module 814 presents skill or knowledge certification tests to the user, scores responses, provides review or remediation suggestions, and gathers the necessary information used for training administration and reporting. The knowledge tests generated by the certification module 814 are computer-generated multiple choice, matching or true/false

questions or end user completion. The module calculates the score, records the results and provides feedback to the user. Skills tests are performance checklists to be completed and updated by the supervisor or evaluator. Thus, the certification module 814 supports evaluation of skill areas where written tests would not adequately measure proficiency.

Fig. 9 illustrates the sales management component 112B connected to the event manager 112B. As illustrated, the sales management component 112B is comprised of modules that are optimized for use with other modules of the sales system. Typically, a sales manager has responsibility for both management of sales personnel and direct sales accountability for certain clients. In this fashion, the sales manager component 112B is an integrated component of the sales manager's sales system. As described above, when the sales manager is located at the home office, the sales manager component 112B is located in the back office system. Alternatively, if the sales manager is mobile, the sales manager component will be located in the salesperson The functionality, however, remains support system 100. The sales manager module 902 of substantially the same. the sales manager component 112B is used by the sales manager to forecast, coach, plan performance, assign tasks, territories, handle commissions, assign task review The fully integrated system also capabilities, etc. provides a common platform between the sales personnel and the sales management personnel to enhance communication and reduce redundant or administrative activities. The system is integrated to permit the sales manager access to the salesperson's usage of the system and further provides objective feedback on the status of sales, performance, goals and other events. It further provides the sales manager with the ability to coach and monitor activities of sales people and enhances the ability to forecast sales and

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related information such as product requirements, product mix, revenue and profit, commissions, pipeline status, etc.

Fig. 10 illustrates an embodiment of the data component including data components 116A and 116B. As illustrated in Fig. 10, the data component 116A includes a data manager 1050 connected to the event manager 201A. The data component 116A also includes a number of local storage area groups made up of various databases. The storage area groups are divided into a manufacturer storage group 1010, and international storage group 1020, a locale storage group 1030 and a salesperson group 1040. The various storage groups may be all stored in a single large memory file or may be in separate memory files.

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The manufacture storage group 1010 includes a services database 1011, a testimonials database 1012, an order requirements database 1013, a financial database 1014, a template of proposals and presentation database 1015, a product information database 1016 and a configuration Each of these databases support the database 1017. operation of one or more subcomponent modules of the above described components in the salesperson support system 100. For example, the financial database 1014 includes up-todate finance and lease rates, terms and incentives. product information database 1016 incudes data related to the features and benefits of a product, the specifications for the product or service being sold, comparative The configuration database 1017 specifications, etc. includes data related to a base model, for example, equipment, options, prices, standard characteristics and relationships of the product.

The international storage group 1020 allows the integrated sales system to be used world wide. The international storage group 1020 includes databases for screens, menus and print text in various languages 1021,

country-supplied products 1022, country rules, currencies, etc., 1023.

The locale storage group 1030, includes databases for locale rules 1031, templates of proposals and presentations 1032, locally-supplied products and services 1033 and archive 1034.

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The salesperson storage group 1040 maintains databases for the salesperson. For example, databases for generated presentations and proposals 1041, orders 1042, contacts, calendar and to-do items 1043, customers, leads and other names 1044, are provided.

The local storage database of data component 116A is optimized for the mobile, disconnected sales environment. Data is optimized to assure security, fast response time, and to provide as much information as possible without requiring the user to "connect" to the global storage of data component 116B of the back office system 200 described more fully below. All components and subcomponent modules of the salesperson support system 100 use a common data architecture.

The data component 116B contains global storage databases divided into a number of storage area groups. A data manager 1090 is connected to the event manager 201B via respective APIs. A manufacturer storage group 1060 stores global information corresponding to the manufacturer storage group of the data component 116A. As described more fully below, the information in the global storage of the data component 116B can be updated using the data tools. The updated data will subsequently be communicated to the salesperson support system 100 to update the local storage of the date component 116A.

The data component 116B also contains an international storage group 1080, having databases corresponding to the international storage group 1020 of the data component 116A. An administration storage group 1070 is also

provided in the data component 116B. This group includes an account data database 1071 and a release data database. The event managers 201A and 201B, date mangers 1050 and 1090, facilitate a proper exchange of data between the local storage of date component 116A and the global storage of the data component 116B.

It is noted that the date in the data component 116B of the back office system is stored in an open database format ODBC) to provide maximum compatibility This facilitates the importation of different systems. data from other enterprise system databases for use by the It further provides for maximum usability of system 20. the data. Such open databases, however, require large amounts of storage space. Thus, a data optimizer is provided in the data tools subsystem 205 of the back office system 200 (Fig. 2), to convert the data into a run time The optimized database is product knowledge database. tuned for speed, size and security. When data is transferred from the data component 116B to the data component 116A, it is first optimized. The databases of the data component 116A store information in the optimized Thus, the storage requirements are minimized and the transfer time is reduced.

Fig. 11 illustrates the subcomponent modules of the communications components 118A and communications components 118A and 118B have respective communications managers 1101A and 1101B and query managers 1102A and 1102B. The communications managers 1101A and 1101B handle communications from the salesperson support system 100 to the back office system 200 including orders, change orders, mail etc. Further communications from the back office system 200 to the salesperson support system 100 are handled by the communications managers 1101A and 1101B. These communications include data updates, product information, leads, incentives, mail, system updates, etc.



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Thus, the communications managers 1101A and 1101B must have the ability to receive incoming information and to process outgoing information.

The query mangers 1102A and 1102B communications between the two systems related to inquires. For example, the query managers handle communication of information related to inventory inquiries, order inquires, price inquires, etc.

The communications components 118A and 118B also include respective communication equipment 1103A and 1103B. The communication equipment communicatively couple the two systems as illustrated by the dotted line 1104. The equipment may include network connections and lines, modems, satellite communications technology, etc. Communication between the two systems is controlled using the event managers 210A and 201B and the communication managers 1101A and 1101B and query managers 1102A and 1102B.

Fig. 12 illustrates in greater detail the data tools subsystem 205 of the back office system 200. As illustrated in Fig. 12, the data tool subsystem 205 includes a number of data tools used to edit and maintain the data. The data tools include a configuration data tool 1202, a specifications and comparison date tool 1204, a graphics and feature information data tool 1206, a customer and leads data tool 1208, a sales processes data tool 1210, a programs and incentives data tool 1212, a services dated tool 1214, an inventory data tool 1216, a finance parameters data tool 1218, a quote terms and conditions data tool 1220, and a training management data tool 1222.

The configuration data tool 1202 allows data maintenance personnel to create, edit and update the configuration portions of the knowledged database. The configuration data tool 1202 includes an editor, allowing the user to create and edit the database, including

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international portions of the database. The configuration data tool 1202 may be used to carry out such functions as data modeling, data editing, auditing, security, and internationalization. The configuration data tool may also be provided with interfacing capability to be used with a data pre-processor to incorporate data from other electronic sources. A data optimizer is used to place the data in the optimized, encrypted run time format.

The specifications and comparison data tool 1204 allows the data maintenance personnel to create, edit and update specifications for the products, as specifications of competitor's products. This data is also stored in the knowledge database. Like the configuration data tool 1202, the specifications and comparison data tool 1204 includes an editor allowing a back office user to create and edit the database including, international portions of the database. The tool can also be used in conjunction with the data pre-processor to incorporate data from other electronic sources. As with the configuration data tool 1202, the specifications and comparison data tool uses the data optimizer to place the data in the optimized run time, encrypted format. The tool may also include data auditing and security functionality.

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The graphics and features data tool 1206 is provided to assist data maintenance personnel in creating, editing, updating and adding text to graphics screens. The resultant data in stored in the knowledge database. The tool includes an editor which allows users to create and edit the textual portions of graphics screens. The graphics and features tool 1206 may be used in conjunction with a scanning device and/or graphic creation and drawing tools to create graphic images. The tool creates the run time database.

The customer and leads data tool 1208 allows back office personnel to maintain and control the data entities

and relationships required for the contact management module 702, provided in the self management component 110. The tool includes import and export capabilities enabling the system to process information to and from other enterprise databases such as telemarketing, customer services, warranty, and management information systems. In this manner, leads can be passed from these other entities directly to the salesperson through the customer and leads data tool 1208.

The sales processes data tool 1210 is provided to create, edit and maintain data elements used to support the objective management module in the self management component of the salesperson support system 100. This tool is used to identify steps and scheduling for processes, develop guidelines for these steps, create checklists for consistent data collection, and enter required follow-up requirements. In addition, a data and formula matrix used to calculate probability of closing a sales opportunities is provided within the sales processes tool 1210.

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The finance parameter data tool 1218 is used to maintain the values, plans and defaults for credit and finance information used by the finance module of the time with customer component of the system. The finance parameter tool 1218 allows maintenance personnel to add or edit interest rates, set finance and lease plan requirements and parameters, control plan and option availability, establish report requirements and set finance plan valid dates.

The quote terms and conditions data tool 1220 is provided to allow back office system 200 maintenance personnel to control and maintain the terms and conditions used by the quotation module of the time with component system. Tax requirements, special fees, discounts and profitability calculations may be set using this tool.

The other data tools are similar in construction and provide similar functionality to those described in greater detail above. Each of the data tools are connected to the event manager 201B, which handles the flow of information throughout the system.

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Fig. 13 illustrates in greater detail the system tools subsystem 207 of the back office system 200. The system tools subsystem 207 of the back office system 200 includes a screens and interface subcomponent module 1302 and a report and templates subcomponent module 1304. The screens and interface module 1302 is used by back office personnel to modify the language or terminology of the screen elements such as controls, buttons, menus, field labels, etc. International language selection can be supported with this tool to provide a sales system usable by salespeople in different languages. The reports and templates module 1304 is provided to modify and create a sales system report format and content. The module may also be used to create and modify proposal templates. Each of the modules are connected to the event manager 201B as illustrated.

Fig. 14 illustrates in greater detail the enterprise system subsystem 209 of the back office system 200. The enterprise subsystem 209 of the back office system 200 is made up of a number of databases and a number of data managers. The system includes a manufacturing system database 1401, a pricing database 1403, an inventory database 1405, a customer database 1407, other legacy system databases 1409 and marketing databases 1411. An out box data manager 1402 manages data output from the databases of the enterprise system 209 and supplies the output information to the event manager 201B. An in box data manager 1404 receives data from the event manager 201 and stores the data in the appropriate database of the enterprise system 209. An enterprise massaging system

manager 1406 is provided to communicate information between the event manager 201B and the various databases of the enterprise system 209.

Figs. 15A-F illustrate in table form an example of how data may be organized in the local information storage databases of the data component 116 of the salesperson support system 100 and the back office system 200. The routing of data, proper classification of data, etc., is controlled by the event manager 201.

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In the tables, the various types of information stored and used by the sales system is listed by category. 15A illustrates the types of customer example, Fig. information typically gathered and used during the sales Also illustrated in the tables are the various process. core components 103 of the salesperson support system 100 the support process components 105. subcomponent modules are also illustrated for the various The table illustrates how each of the subcomponent modules, under control of the event manager 201 are granted access to the particular types of data. Subcomponent modules marked with a "+" symbol have access to the corresponding data for both read and write purposes. Subcomponent modules marked with a "#" symbol have read only access to the corresponding data. Subcomponent modules left blank do not have access to the data.

As illustrated in Figs. 15A-15F, the data may be used commonly by more than one of the various components and subcomponent modules. In this manner, the components and modules are integrated together for a common exchange of information via the event manager 201. As illustrated, data stored in a single location is used by the various components and subcomponent modules during different phase of the overall sales process. It is can also be appreciated from the tables of Figs. 15A-15F that data which is updated using one module will be automatically

reflected in other modules which rely on the particular data. In this manner, the salesperson can be confident that the most recent data is being used since regardless of when in the sales process the data is changed it will be automatically reflected in each component which relies on the data.

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By way of example, a salesperson meeting with a current customer may learn that the customer has moved to a new Using the self management component 110, the address. salesperson enters the new address information into the customer information database. The event manager 201A recognizes this event. If the customer currently has an order not yet delivered when the data is updated in the common database, the event manager 201A instructs the order management component 106 to automatically reflect the change. Alternatively, the event manager 201A can be used to prompt the salesperson that the data which is being updated is being used or relied upon by another component of the sales system. The salesperson can confirm that the updated information should be used in other parts of the system. For example, the system will inquire under control of the event manager whether the change in address requires a change in the delivery address for an order. If the new address should be used for the delivery, the change order subcomponent module 506 is initiated with the new information reflected and a command is given to update the delivery address information in the order. Thus, the order will now reflect the proper address information ensuring proper delivery.

Fig. 15C illustrates another example of how the fully integrated sales system uses the common exchange of information to facilitate the overall sales process. Using the self management component 110, the salesperson generates a forecast with the forecasting subcomponent module for the upcoming year. The forecasting module

accesses information generated with the quote module to prepare quotes for customers, such as unit quantity, quoted price and discount description, thereby basing the forecast on the most recent quotes which the salesperson has prepared.

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Fig. 16-18 are flow charts illustrating the operation of the above described embodiment of the invention. Referring to Fig. 16, the operation of the system when used to generate a proposal will be described. At step S101, the salesperson using the salesperson support system 100 accesses or generates customer information for a proposal. The system may invoke the contact module 702 of the self management component 110 and retrieve data from the salesperson storage group 1040.

At step S102, the product module 402 of the time with customer component 104 (Fig. 4) is used to tag features and benefits, as well as competitive information for the proposal to be generated.

At step S103, the configuration module 406 of the time with customer component 104 is used to create a customer As described above, the configuration may solution. previously have been created and the information residing therein may automatically be used at this step to generate a customer proposal. At step \$104, the quote module 408, finance module 410, and any other needed modules are accessed and used to prepare all of the desired information At step S105, certain to be included in the proposal. selections of the proposal may be edited as permitted by the locale rules database 103. Only certain users of the system may be validated for such an operation. If the user is not validated, step S105 is skipped and the system proceeds directly from step S104 to step S106. At step S106, the system automatically creates, prints and saves a proposal using the information generated using the various subcomponent modules described above.

At step S107, the event manager 201A recognizes the proposal generation event and instructs the opportunity and forecast modules of the self management component 110 to update opportunity and forecast status to reflect the newly created proposal. Upon completion of the update, step S108, the updated opportunity status is transmitted to the back office system 200. It is noted that the salesperson support system 100 may be operated disconnected from the back office system 200. In this instance, the data is placed in the out box of the communication component 118A and is automatically transmitted at the next connected session with the back office system 200.

At step S109, the back office system 200 receives the updated opportunity status information at the communication manager in the communication component 118B. This information is transferred via the event manager 201A to the sales manager module of the sales management component 112B and is reflected in the database component 118B. At step S110, the sales management forecasts are now properly updated to reflect the proposal created using the salesperson support system 100.

Upon completion of step S110, the operation of the proposal generation is ended.

Fig. 17 illustrates the use of the system 20 (Fig. 2) during the order submission process. At step S201, an order process is initiated by the salesperson. If not, a message will be provided to the salesperson, otherwise the system proceeds to step S202. At step S202, the system checks order requirements by accessing the order requirements database 1013 of the manufacturer storage group 1010 via the event manager 201A and the data manager 1050 (Fig. 10). The system then accesses the presentations and proposals database 1041 of the data component 116A to retrieve a configuration of the system to be ordered.



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At step S204, the event manager 201A creates a work session file which is used to manage information related to the order. At step S205, the system automatically accesses the configuration module 406 to create or modify the configuration as needed.

At step S206, the system accesses the customer module to complete customer information as needed.

At step S207, the system prompts the user to enter any additional order information needed such as quantity, "ship to", "bill to" and special instructions.

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The system then checks user status by referring to the locale rules database 1031 at step S208 to confirm that the user is granted valid access to submit an order. Assuming the user has access, the system proceeds to step S209 and transfers the order from the event manager 201A to the out box of the communications component 118A via the communication manager 1101A.

The event manager 201A recognizes the order submittal process and initiates a series of automatic steps. At step S210, the system stores a record of the order in the orders database 1042. At step S211, the system automatically updates the opportunity status of the opportunity module 704 of the self management component 110. At step S112, the to do module 708 of the self management component 110 is accessed by the system and follow-up items are automatically added to the salespersons to-do list. Because the self management component 110 is integrated via the intelligent event manager 201A to the order management component 106, the system automatically creates the follow-up to do list and updates the opportunity status without requirement of any further interaction with the user.

At step S213, the system transmits the order to the back office system 200 via the communications component 118A out box at the next connected session. At step S214,

the communication manager 1101B of the communication component 118B receives the order from the communication equipment 1103B. The communication manager notifies the information to the event manager 201B of the back office system 200. At step S215, the event manager transfers the order information to the enterprise system 209. The system also updates the sales management forecast in the sales management component 112B to reflect the order at step S216.

At step S217, the enterprise system notifies the communication manager out box, via the event manager 201B, of an order acknowledgment which is transmitted to the sales representative. At step S218, the salesperson is notified of the acknowledgment. Upon completion of step S218, the order submission process is complete.

Fig. 18 illustrates the process flow for a price information update operation. At step S301, pricing information is updated in the system. The pricing information may be updated using the configuration data tool of the data tools subsystem 305(?) or may be received from the pricing database of the enterprise system. At step S302, the price change is transferred to the global information storage of data component 118B. The updated data is also transferred via the event manager 201B to the communication manager of the communications component 118B.

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At step S304, the system accesses the account data database 1071 of the data component 116B and checks the user data file for replication instructions. The price data is transferred at the next connect session at step S305.

At step S306, the updated price information is received by the communication manager of the communication component 118B. At step S307, the system updates the price file and marks old information as invalid in the configuration database of the data component 116A. The system also leaves an audit trail message in the out box of the communication component 118A for transfer to the back office system during the next connected session at step \$308.

Finally, at step S309, the system may be used to automatically notify the salesperson of any outstanding quotes which are affected by the price change. Upon completion of step S309, the process ends.

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As described above, each event occurring in the sales process is handled by an event manager which recognizes the event, notes the context in which the event occurs and automatically initiates additional action based on the event and its context. The operation of the event manager will be better understood by reference to the exemplary embodiments described below. These embodiments are provided by way of illustration, and not limitation, to demonstrate how the various types of information made available during the sales process can be used by an automated sales system to facilitate the sales process.

As described above, object oriented programming (OOP) may be used to implement the various subsystems. In such an implementation, the functionality of the various modules and subsystems may be implemented in the form of business objects. In such an implementation, the business objects can be the focal point of behavior in an OOP based sales system. For example, the business objects can trap application events (which represent actions by the user) and apply a set of behavior rules to the application events. A typical business object may provide or receive information to or from a user through the occurrence of an application event.

Application events in the disclosed embodiment are internal to the sales system and generally represent a sales event occurring in the sales process. In other words, a sales event may be an event in the sales process,

typically occurring between the salesperson and the customer, while an application event may be an internal operation of the sales system (i.e., the operation of the software and hardware making up the sales system) which is used to electronically facilitate the sales event. In such a system, the occurrence of a sales event can be made known to the sales system by the occurrence of an application For example, the generation of a proposal for a customer is a sales event which occurs in the time with customer phase of the sales process. When the sales system is used to generate the proposal, a business object of the proposal generation module in the time with customer component typically will be used by the system. described more fully below, such use of this business object will inform the sales system that the generation of a proposal has just occurred in the sales process. information may then be used by the sales system to facilitate (or initiate) specified application events, which in turn drive sales events (e.g., to enter tasks into a to-do list for actions to be taken by the salesperson or to automatically carry out a task in the sales process).

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As can be appreciated, in many instances a sales event and its related application event may be used interchangeably to describe an event. In the discussion below, where a distinction between the two types of events is useful, the terms sales event and application event are used. Where the discussion applies more generally to both types of events the term event may be used in a more generic form.

Fig. 19 illustrates an exemplary embodiment of an event manager 201. The event manager shown includes an event managing unit 1902 coupled to an event manager rules database 1904. An editor 1906, which is shown coupled to the event manager, rules database 1904 and may be used to alter the contents of the event manager rules database

1904. The event manager rules database 1904 may also be viewed via a monitoring unit 1908, which typically is configured to provide for an administrative view of the event information. Also in Fig. 19, a business object 1908, a data object 1910 and a container 1912 are shown for purposes of illustrating the operation of the event manager 201.

In one embodiment, a system using an event manager as depicted in Fig. 19 is implemented in a An exemplary layered architecture is architecture. illustrated in Fig. 20. The layered architecture enables developers to change areas of the system without impacting areas outside the defined areas. The system shown has four layers; the platform layer 2002 (typically including operating systems, networks, peripherals, etc.), the data layer 2004, the business objects layer 2006 and the application layer 2008. In the embodiment illustrated, the layers communicate with each other through three defined protocols illustrated as protocol layers 2001, 2003 and 2005 between the platform layer 2002 and the data layer 2004, the data layer 2004 and the business objects layer 2006, the business objects layer 2006 and the application layer 2008, respectively.

The third protocol layer 2005 may be used to implement the intelligent operation of the system by establishing the interaction of events and actions between objects and applications as well as between objects themselves. In other words, events may be tied (or paired) together in the third protocol layer 2005. When one event occurs on this level (e.g., the generation of a proposal in the proposal generation module), the system automatically recognizes the event, and its significance and may automatically initiate another event in the sales process (e.g., scheduling a follow-up in the time management module) on the third protocol layer 2005. In other words, the third protocol

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layer 2005 can be the layer on which paring (or grouping) of application events occurs. However, as described more fully below, the grouping operation of the event manager depicted in Fig. 19 typically is driven on the basis of data. In this matter, the pairing or grouping of events may be considered as occurring on the second protocol layer 2003.

In the embodiment shown, the second protocol layer 2003 provides for communication within the system. As described above, the system may be implemented using distributed technology. Typical communication within such a system may be abstracted into four basic types: (1) Distribution; (2) Replication; (3) Transaction: and (4) Messaging. Communication on this protocol layer now will be briefly described.

Distribution generally refers to and includes en mass file copying. This would include general functions such as copy, move, create, delete, and the like. The distributed files and information types can be maintained in a number of different ways. For example, a version number may be used. Each file may be assigned a version number which changes when the content is changed. The distributed files can also be updated with changes which occur only in the system and not in the complete file. This type of change may be termed a net change. Files and information types can also be maintained with tokens. A token is set valid for a given period of time for a given user. This may also be used as a security mechanism of the system as well.

Replication may be used when a user does not need the entire set of information contained in a given source. Used in this manner, replication enables a user to receive relevant information only. This reduces the amount of information that is transferred during maintenance.

A Transaction operation may be used for information support. It typically includes functions such as insert,

delete, select (query), post, commit, etc. This type of operation generally is more efficient when handling tabular information.

The Messaging function may be used to enable workflow in the system, such as by enabling the business objects to communicate state and status information with each other. For example, messaging operations may include post route, send, broadcast, receive, listen, etc.

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Typical operation of the event manager 201 will now be In the disclosed embodiment, upon occurrence of an application event using the business object 1908, the business object 1908 exposes 1914, the event and associated event handlers to the event managing unit 1904, and the information contained in the exposed . event is used to by the event managing unit 1902 to create or update a database in the event manager database 1904. On the basis of rules and state information stored in the event manager database 1904, the event managing unit 1902 may be configured to dynamically bind event handlers (in the form of an event map) to the exposed events (as represented by line 1916). The event handlers typically dictate further action to be taken by the system resulting occurrence of the particular sales represented by the business object 1908.

As described above, a typical business object may provide or receive information to or from the user. The information may be taken from or put to a data object 1910 with the data objects stored in a container 1912. The container 1912 may be a special business object such as a repository for data objects that may or may not be operated on by the business object 1908.

In the embodiment described above, the event manager automatically binds a sales event to one or more other sales events as directed by the rules and other information in the event manager database 1904. The rules may

prescribe that on the occurrence of a particular event, an event record is examined in the event manager database to determine if other related events have occurred, and if the other events have occurred, the rules may indicate that another sales event should be initiated.

By way of example, a sales event such as the introduction of a new incentive program for a specified product may occur. A business object associated with handling incentive programs may be used to update data related to incentive information in the system. The event manager may automatically recognize a change in the incentive program for the specified product, check to see if there are outstanding proposals for the specified product, and if so, direct a business object in the self management component to automatically generate a letter informing the customer of the new incentive program.

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Further intelligence may be provided in the system to evaluate the context in which the sales event occurs (e.g., the significance of other information in the system). the above example, the event manager may also check customer information, and determine whether the new incentive fits the customer profile. For example, the customer may have indicated a maximum down payment available to the customer. If the incentive program calls for a higher down payment, then a decision may be made that the incentive program need not be sent to the customer. this manner, the context in which the sales event occurs (e.g., whether outstanding proposals exists, whether the incentive is inconsistent with customer information) may be used in connection with the occurrence of the event to determine what if any subsequent action should be taken by the system.

In the manner described above, different events may be paired (or grouped) together. In Figs. 21A-21G, a table provides examples of how sales events may be linked

together by the event manager database. In Figs. 21A-21G, exemplary events are listed in column 2102. The exemplary components and related modules used to facilitate the sales events are listed in columns 2101 and 2103. In column 2104, examples are provided illustrating how a rules database in the event manager database 1904 may link the sales events to other sales events facilitated by the system. The provided examples are not exhaustive, but rather illustrate different types of events that may be paired to facilitate the sales process.

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Referring again to Fig. 19, the rules applied by the event managing unit 1902 can be manually entered into the event manager data base 1904 using the editor 1906. In this manner, the operation of the system in response to a particular event can be altered by changing the information in the event manager database without altering the business objects used by the system. In other words, the subsequent automatic operations carried out by the system are driven by the contents of the event manager database 1904. This allows the system to be highly customizable without requiring extensive reprogramming of the business objects used to facilitate sales events. If desired, changes in the rules database may be made transparent to the business objects.

Fig. 22 illustrates an alternative embodiment which incorporates an expert system 2002 which allows the system to learn successful sales approaches and automatically implement such approaches in future sales process. For example, the expert sales system may be programmed to monitor the sales processes for desired (successful) sales events. These events may be include, for example, a customer purchase of a product, a repeat sale to a customer, a large number of leads being qualified to potential customer, and the like. These events represent successes in the sales process. When a successful event

occurs, the system preferably identifies the events or actions leading to the desired outcome. The expert system may then dynamically alter the rules in the event manger database 1904 to automatically initiate (or set different values for) the identified events or actions in similar subsequent sales activity.

The expert system 2002 may monitor a large number of successful events and determine the common characteristics of the events and actions leading to successful events and then change the rules on the basis of this experience. In this manner, the expert sales system allows the entire sales force to pool knowledge and experience such that the entire sales force gains from the shared experience. This allows the successful tactics of experienced salespeople to be provided as defaults for inexperienced salespeople. This also allows a generic sales system to be used in a particular sales environment or in a geographic region and to learn successful default operations to maximize the sales opportunities.

The expert system 2002, may also be implemented to predict the most successful course of action based on the information available to the system at the time a sales event occurs. For example, an inference engine may be incorporated into the expert system 2002 to select an appropriate course of action to be taken when prior events of interest suggest different, conflicting courses of action. Consider the above example, where a new incentive In addition to the previously program is introduced. described information, the system may have a vast amount of knowledge (or information) which may be useful to determine the best course of action. For example, based on prior experience, it may determined that customers in the particular customer's geographic region typically participate in the type of incentive program offered. This would suggest that it would be advisable to make

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appropriate offers, such as by sending out a letter. The system may also contain a record indicating similar incentive programs being rejected by the particular customer a number of times in the past. This would indicate that it might be better to leave the customer to consider the current outstanding proposal.

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Such facts related to the event may be taken into consideration by an experienced salesperson to determine if and how the new incentive program should be presented to a particular customer. As can be appreciated, a large number of pieces of information available in the sales system may each be related to whether a subsequent action (e.g., sending out a letter) should be initiated. All of the potential scenarios in which the fact patterns may be developed may make it extremely difficult to code specific rules for making such a decision. Thus, in accordance with one embodiment of the system, an inference engine may be employed to make the decision of whether particular subsequent action should be taken.

A typical inference engine relies upon a number of independent rules which may be conceptualized as a number of statements in the form IF X THEN Y. In the above example, these rules may be of the from:

IF proposal exists for product THEN send letter;
IF insufficient down payment THEN no letter;
IF location is Midwest THEN send letter;

IF prior rejection THEN no letter.

In its most simple form, the inference engine may determine whether more rules indicate that a letter should be sent or not. The different rules could also be weighted to provide a heavier influence by some of the rules on the outcome. Moreover, the rules may be more complex such as

IF X AND Z THEN Y. The above example is provided as a simplified illustration of the general operation of an expert system using an inference engine in the system of Fig. 22.

It is noted that such an expert system may be developed by generating rules based on the knowledge and experience of the most experienced salespeople. Then, a relatively inexperienced salesperson can use the system to facilitate a sale by automatically identifying events that suggest further action and by suggesting a best course of action based on the outcome of the rules. It is further noted that the rules used (e.g., in the inference engine) may examine vast amounts of information gathered during the sales process to suggest or initiate action. The volume of information available and considered may far exceed the amount of information that even an experienced salesperson would be capable of examining. Moreover, the system may be implemented so that information is automatically reviewed, eliminating the need to identify which information may be relevant each time the situation arises. Also, the time which would otherwise be spent retrieving and reviewing the information is now made available to the salesperson for other more productive activities.

It is also noted that, in dealing with additional customers, the rules used by an expert system employing an inference engine may be derived from actual experience. Successful tactics may be remembered by the system and used to drive the THEN statement for a particular set of facts.

The advantages of using the intelligence of an expert system extends across the various phases of the sales process. For example, the system can track customer profile information as it is gathered during the presales phase of the sales process and can correlate that to whether a sale is made by examining activities in the order management phase of the sales process. In this manner, the



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system may intelligently leverage such information to glean which types of presentations and proposals are effective with the particular customer profile and set this information as a default for the system whenever a similar customer profile is associated with a customer for which a presentation or proposal is being prepared. During the configuration process, specific types of information may be automatically tagged for inclusion in a presentation or proposal on the basis of the particular customer's profile. The intelligent ability to alter defaults for the system on the basis of the customer profile enhances the likelihood of a sale and reduces the workload of the salesperson.

Another example of using the knowledge base of the system is in generation of forecasts. The system may continually evaluate and track events and actions which predict outcome. Upon occurrence of a particular event or set of events, the system can dynamically update the probability of sale.

Fig. 23 illustrates the general interaction of an expert sales system through various phases of the sales process. Four general phases of the sales process, (e.g., the lead generation phase 2301, the time with customer phase 2305, the order management phase 2306 and the customer retention phase 2307) are illustrate in Fig. 23. The lead generation phase 2301 includes three sub-phases which correspond to a salesperson receiving a lead (suspect) 2302, determining whether the lead can use the product to be sold (qualify) 2303, and generating a qualified lead (prospect) 2304.

An intelligent system 2312 typically interacts with each phase of the sales process as illustrated in Fig. 23. Such an intelligent system generally includes a knowledge database 2308, plus logic 2309 to realize the implication of the knowledge and logic to strategize 2310 based on the realized implication. As diagrammatically illustrated in

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Fig. 23, such a system will gather knowledge by monitoring the operation of the system in the various phases of the sales process (i.e., knowledge is gathered as the automated sales system is used to facilitate the sales process). Thus, the knowledge database 3208 may include information prior sales experience using the sales system and successful strategies employed in the prior uses. The gathered knowledge, as realized and strategized, is then used by the system to impact the overall sales process.

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The foregoing description, which has been disclosed by way of the above examples and discussion, addresses embodiments of the present invention encompassing the principles of the present invention. The embodiments may be changed, modified and/or implemented using various types of arrangements. Those skilled in the art will readily recognize various modifications and changes which may be made to the present invention without strictly following the exemplary embodiments and applications illustrated and described herein, and without departing from the true spirit and scope of the present invention which is set forth in the following claims.

#### What Is Claimed Is:

> 1. A computer implemented sales system used to facilitate a sales process, the system comprising:

a plurality of subsystems each corresponding to a phase of the sales process and facilitating one or more events occurring in the corresponding phase of the sales process; and

an event manager, coupled to each of the subsystems, the event manager recognizing an event carried out by a first subsystem of the plurality of subsystems, determining a context in which the recognized event occurs and automatically initiating an operation in a second subsystem of the plurality of subsystems to facilitate a new event based on the context in which the recognized event occurs.

- 2. A system as recited in claim 1, wherein the context in which the recognized event occurs includes information related to a phase of the sales process in which the recognized event occurs.
- 3. A system as redited in claim 1, wherein the context in which the recognized event occurs includes information related to whether a previous event has occurred in the sales process.
- 4. A system as recited in claim 1, further comprising:
- a first memory storing a plurality of rules, each rule indicating subsequent action to be taken by a subsystem of the sales system upon occurrence of a corresponding event occurring in a particular context; and means for identifying a rule stored in said first memory corresponding to the context in which the recognized

event occurred and for initiating the operation in the second subsystem based on the identified rule.

- 5. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale, and the second subsystem comprises a lead management subsystem for use in converting a name to a potential customer.
- 6. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale, and the second subsystem comprises an order management subsystem for use in converting the sale such that a product or service delivered matches a product or service sold.
- 7. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale, and the second subsystem comprises a customer retention subsystem for use in converting an existing customer into a lead thereby gaining repeat sales.
- 8. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale, and the second subsystem comprises a self management subsystem for use in assisting a salesperson in managing their own sales information.
- 9. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale,

and the second subsystem comprises a training subsystem for use in providing training to a salesperson.

- 10. A system as recited in claim 1, wherein the first subsystem comprises a time with customer subsystem for use in converting a lead to a customer, thereby closing a sale, and the second subsystem comprises a sales management subsystem for use in assisting a sales manager in managing a plurality of salespeople.
- 11. A system as recited in claim 1, wherein the first subsystem comprises an order management subsystem for use in for use in ensuring that a product or service delivered matches a product or service sold and the second subsystem comprises a self management subsystem for use in assisting a salesperson in managing their own sales information.
- 12. A system as recited in claim 1, wherein the first subsystem comprises a lead management subsystem for use in converting a lead to a customer and the second subsystem comprises a self management subsystem for use in assisting a salesperson in managing their own sales information.
- 13. A method of facilitating a sales process using a computer configured to have a plurality of subsystems, each corresponding to a phase of the sales process, in order to facilitate an event occurring in a related phase of the sales process, the method comprising the steps of:
- (a) facilitating a first event occurring in the sales process using a first subsystem of the computer;
- (b) automatically detecting the occurrence of the first event and determining a context in which the first event occurred; and

- (c) automatically initiating an operation in a second subsystem of the computer to facilitate a new event based on the context in which the first event occurred.
- 14. A method as recited in claim 14, wherein the determining step (b) comprises the steps of:

determining whether a prescribed event has previously occurred in a sales event prior to occurrence of the first event; and

indicating whether the prescribed event has previously occurred as at least part of the context in which the first event occurred.

- 15. A method as recited in claim 14, wherein the first subsystem is used to facilitate an event occurring while a salesperson is with a customer and the second subsystem is used to facilitate an event occurring while managing an order made with the customer.
- 16. A method as recited in claim 14, wherein the first subsystem is used to facilitate an event occurring while converting a name into a customer and the second subsystem is used to facilitate an event occurring while a salesperson is with the customer.
- 17. A computer implemented sales system used to facilitate a sales process, the system comprising:
- a plurality of subsystems each electronically facilitating an event occurring in the sales process; and

an event manager coupled to each of the plurality of subsystems to detect the occurrence of a first event in the sales process, to link the first event in the sales process with a second event in the sales process based on prior sales experience using the sales system, and to

automatically initiate an operation using one of the plurality of subsystems to facilitate the second event.

- 18. A system as recited in claim 1, wherein the event manager comprises an expert system.
- 19. A system as recited in claim 19, wherein the event manager comprises an expert system provided to automatically monitor events occurring in the sales process to identify which events lead to a desired outcome in a use of the sales system to produce a knowledge database for use in subsequent operations as the prior sales experience using the sales system.
- 20. A system as recited in claim 20, wherein the expert system comprises:
- a knowledge database storing information related to the prior sales experience using the sales system;

means for realizing the implication of the information stored in the knowledge database; and

means for strategizing a desirable subsequent action based on the implication of the information stored, wherein the operation automatically initiated by the event manager carries out the desirable subsequent action.

#### SMALL BUSINESS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 C.F.R. 1.9(f) AND 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am
a) () the owner of the small business concern identified below:
b) (X) an official of the small business concern empowered to act on behalf of the concern identified below:
NAME OF CONCERN: Clear With Computers, Inc.
ADDRESS OF CONCERN: 1983 Premier Drive, P.O. Box 4459  Mankato, MN 56002-4459
I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. 121.3-18, and reproduced in 37 C.F.R. 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.
I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled <a href="INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM">INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM</a> by inventor(s) <a href="Jerome D. Johnson">Jerome D. Johnson</a> , <a href="David R. Lundberg and Michael P. Krebsbach">David R. Lundberg and Michael P. Krebsbach</a> described in a) () the specification filed herewith.
b) () provisional application serial no, filed
c) (X) non-provisional application serial no. <u>08/550,089</u> , filed <u>October 30, 1995</u> . d) () patent no, issued
If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 C.F.R. 1.9(c) or by any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. 1.27)
NAME
ADDRESS  a) () INDIVIDUAL b) () SMALL BUSINESS CONCERN c) () NONPROFIT ORGANIZATION  NAME
ADDRESS  a) () INDIVIDUAL b) () SMALL BUSINESS CONCERN c) () NONPROFIT ORGANIZATION
I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. 1.28(b))
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.  NAME Jerome D. Johnson  TITLE President
ADDRESS 1983 Premier Drive, P.O. Box 4459, Mankato, MN 56002-4459
SIGNATURE MONE OF PAS, DATE 1/11/96

# MERC. T, GOULD, SMITH, EDELL, WELTER .. CHMIDT United States Patent Application

#### COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: <a href="INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM">INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM</a>.

The specification of which

- a. \_ is attached hereto
- b. X was filed on October 30, 1995 as application entitled INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM, having an attorney docket number 7709.72US01 and was amended on \_ (if applicable) (in the case of a PCT-filed application) described and claimed in international no. \_ filed \_ and as amended on \_ (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (see page 3 attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

- a.  $\underline{X}$  no such applications have been filed.
- b. \_ such applications have been filed as follows:

COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
		(uay, mount, year)	(day, month, year)
ALL FOR	EIGN APPLICATION(S), IF ANY, I	FILED BEFORE THE PRICE	ORITY APPLICATION(S)
ALL FORI	EIGN APPLICATION(S), IF ANY, I	FILED BEFORE THE PRICE	DRITY APPLICATION(S)  DATE OF ISSUE

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

```
Adriano, Sarah B.

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Reg. No. 17,248

Gorge H.

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Forman, Charles B.

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Golla, Charles E.

Reg. No. 28,184

Golla, Charles E.

Reg. No. 28,184

Gorgen, Alan G.

Reg. No. 38,122

Reg. No. 31,101

Reg. No. 17,089

Reg. No. 18,223

Reg. No. 18,223

Reg. No. 29,165

Reg. No. 31,130

Reg. No. 29,165

Reg. No. 31,131

Reg. No. 31,131

Reg. No. 29,165

Reg. No. 31,131

Reg. No. 31,131

Reg. No. 29,165

Reg. No. 31,131

Reg. No. 18,141

Reg. No. 31,131

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I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant, Gould to the contrary.

Please direct all correspondence in this case to Merchant, Gould, Smith, Edell, Welter & Schmidt at the address indicated below:

Merchant, Gould, Smith, Edell,
Welter & Schmidt
3100 Norwest Center
90 South Seventh Street
Minneapolis, MN 55402-4131

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

	_	Full Name	Family Name	First Given Name	Second Given Name
į	0	Of Inventor  Residence & Citizenship	Johnson  City  North Mankato	State or Foreign Country Minnesota	Dale Country of Citizenship U.S.A.
	1	Post Office Address	Post Office Address 2409 Northridge Drive	City North Mankato	State & Zip Code/Country Minnesota 56003/U.S.A.
<u> </u>	2	Full Name Of Inventor	Family Name Lundberg	First Given Name David	Second Given Name Robert
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	3	Post Office Address	Post Office Address Ver Europalaan 5, 2111 WJ	City Aerdenhout	State & Zip Code/Country The Netherlands

$\sim$ 1		
Signature of Inventor 20	Signature of Laventar 20%	Signature of inventor 263
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Revised 4/5/93

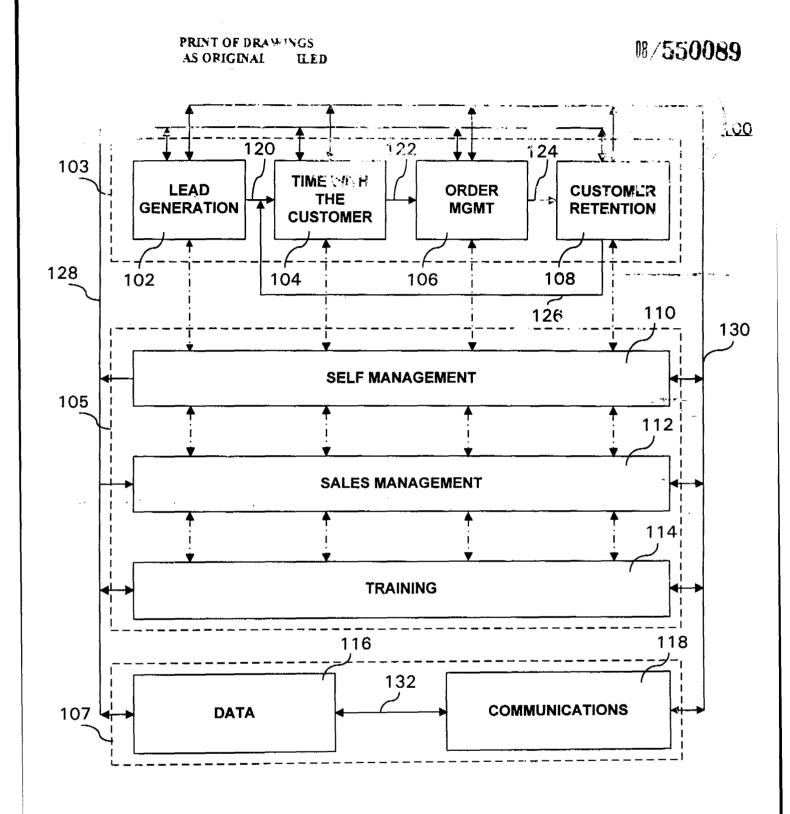
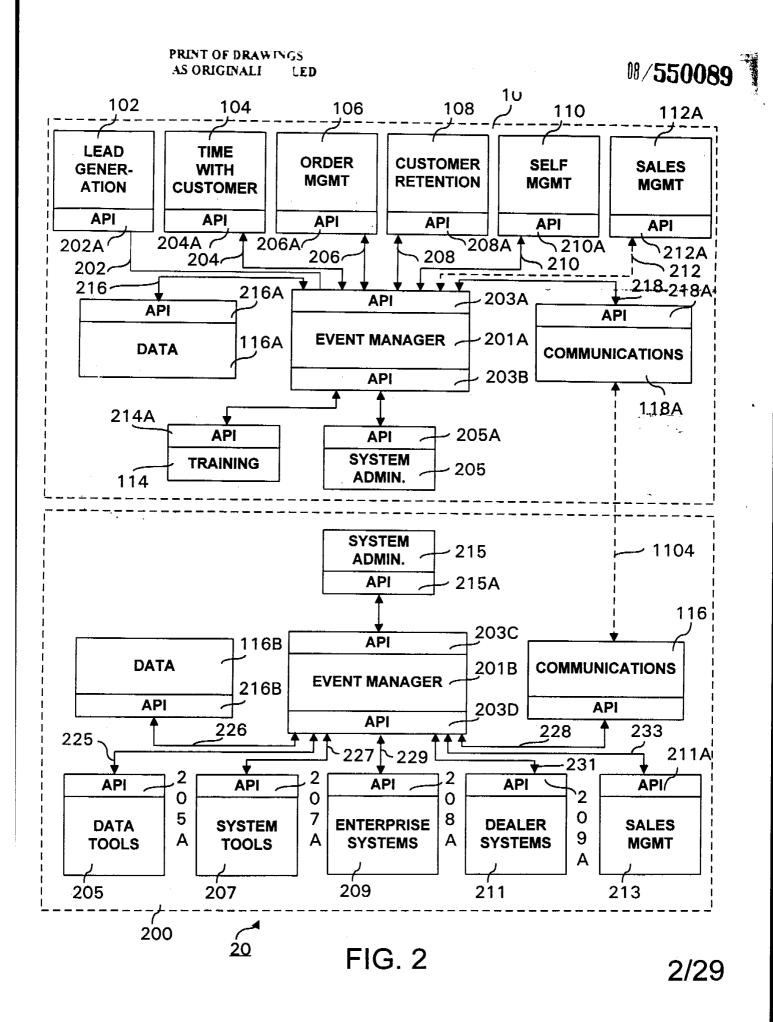


FIG. 1



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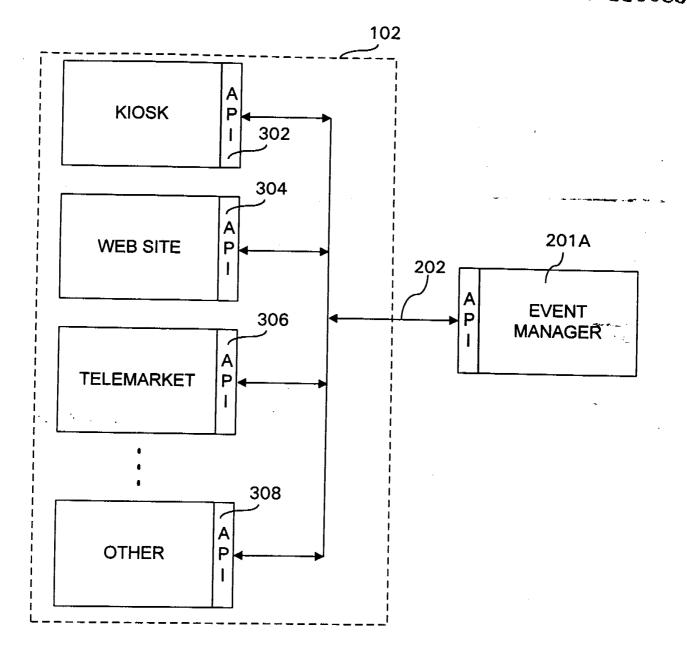
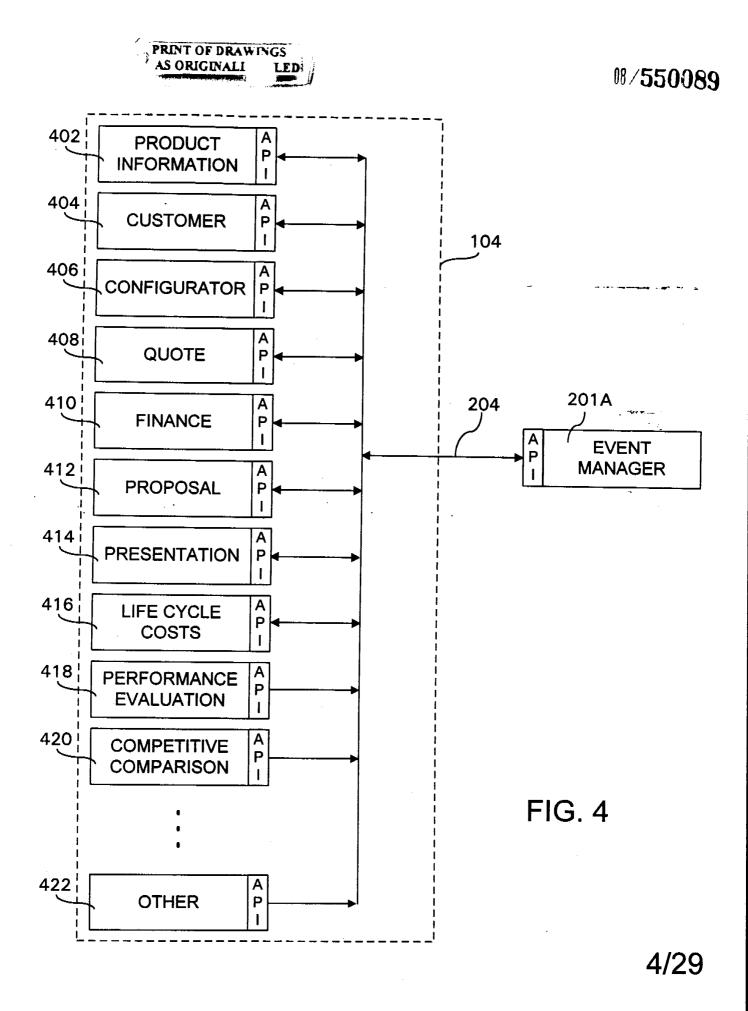


FIG. 3



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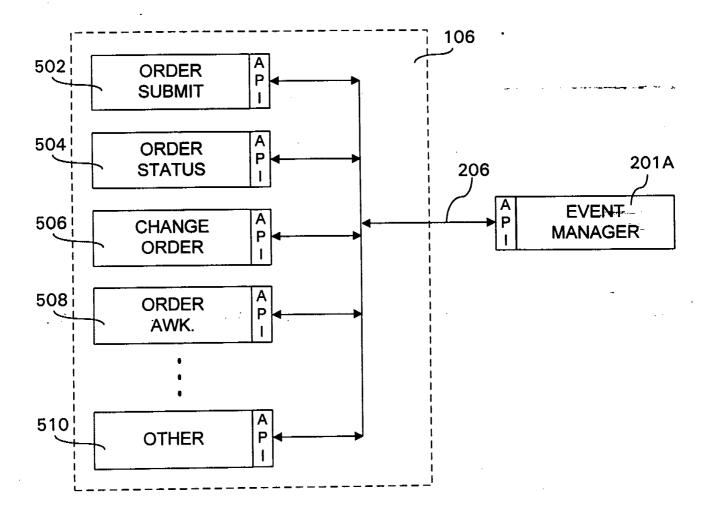


FIG. 5

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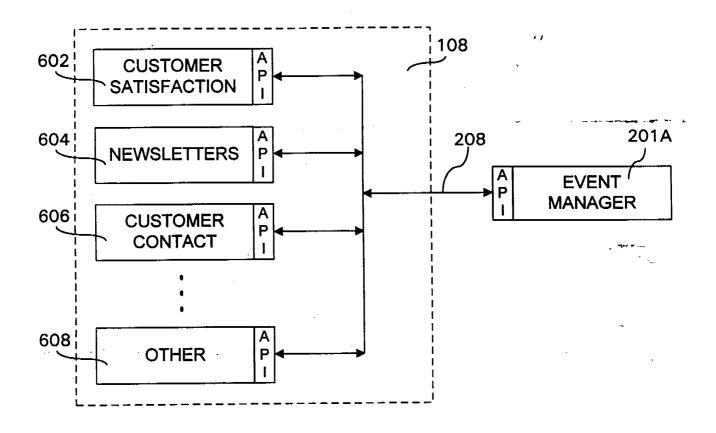


FIG. 6

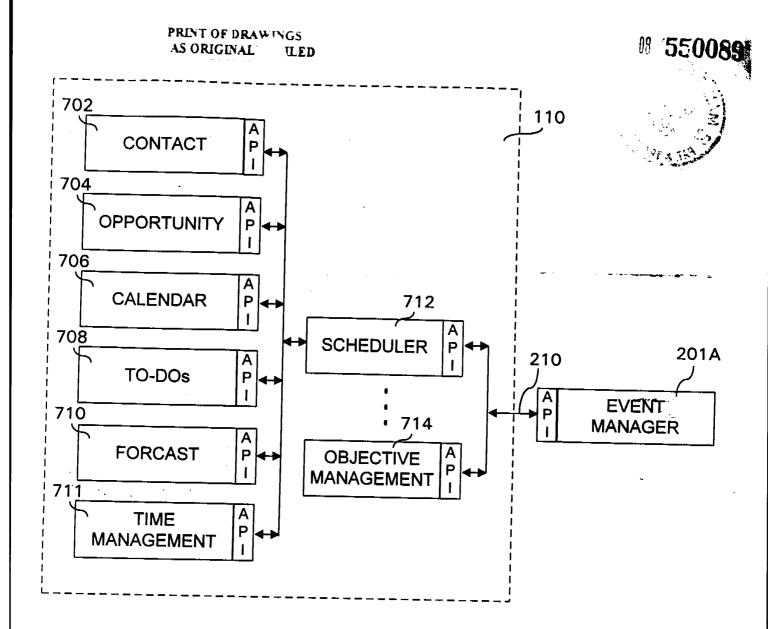


FIG. 7

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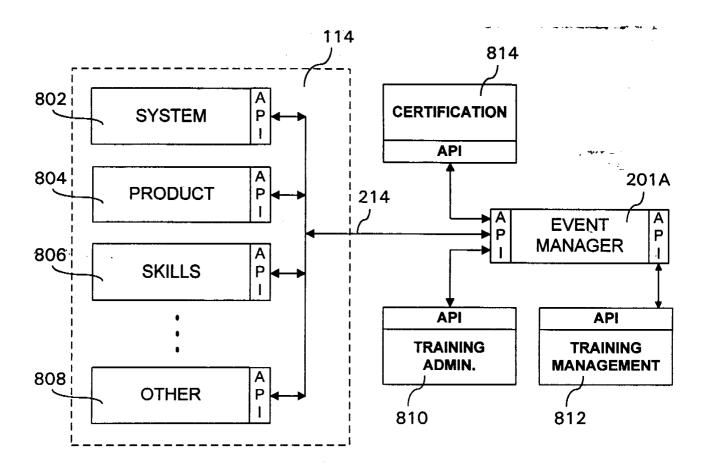


FIG. 8

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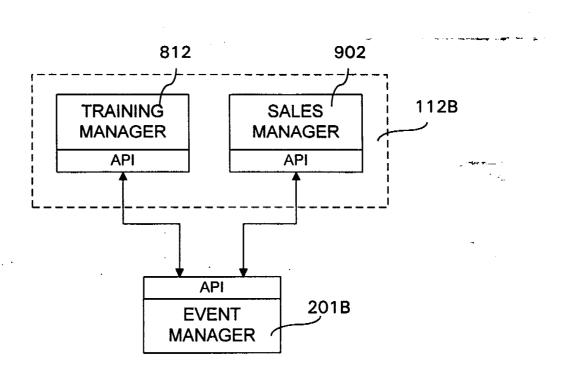
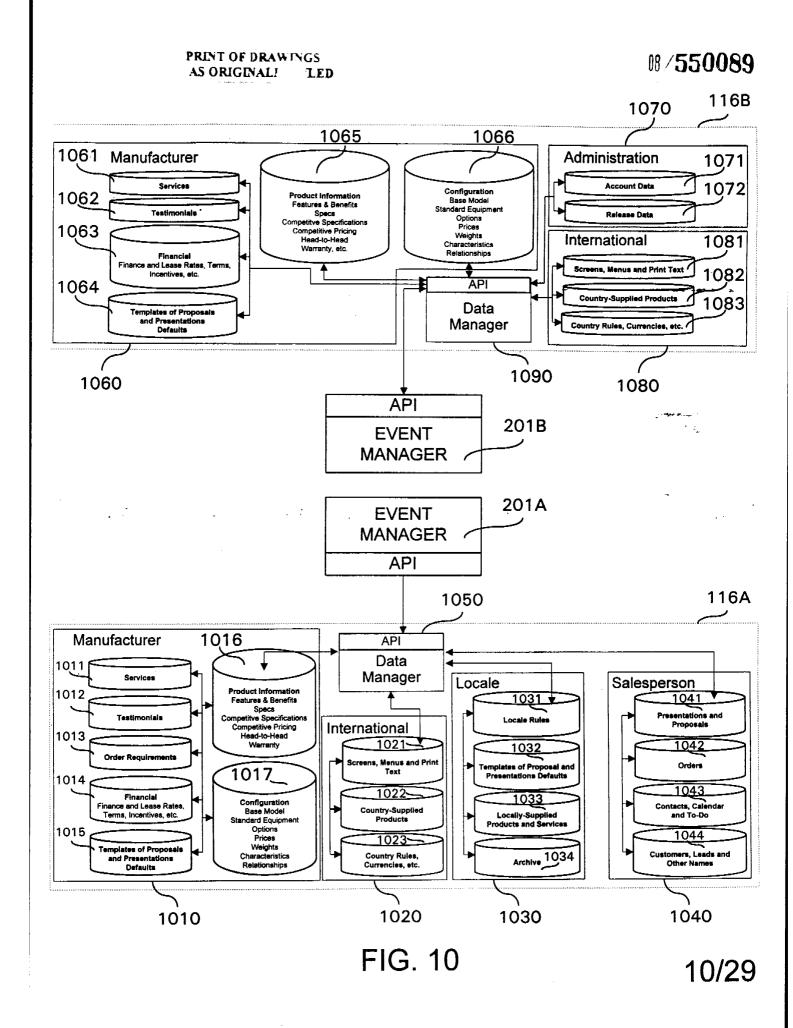
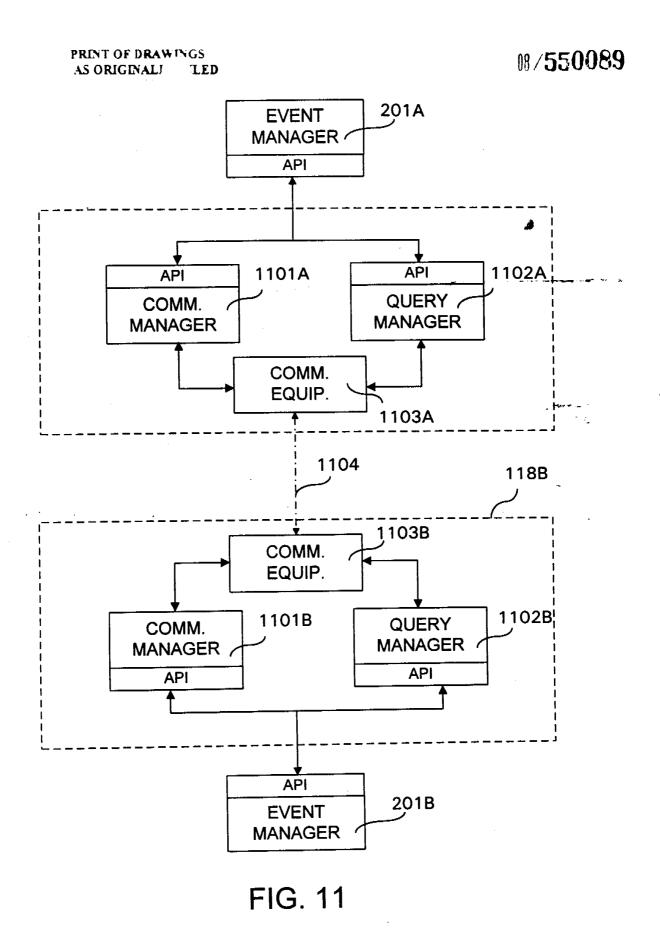


FIG. 9





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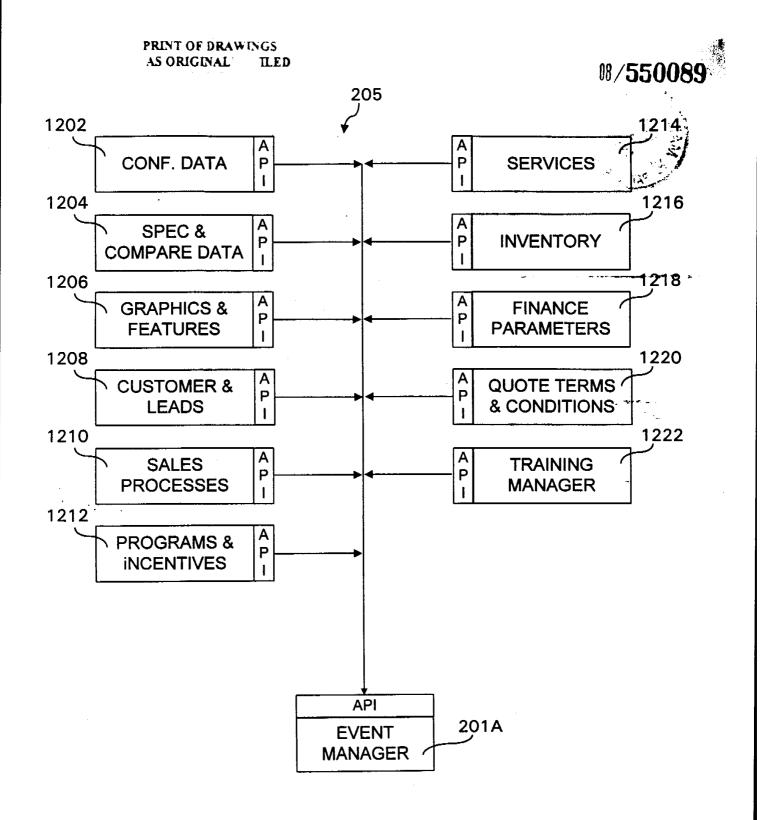


FIG. 12

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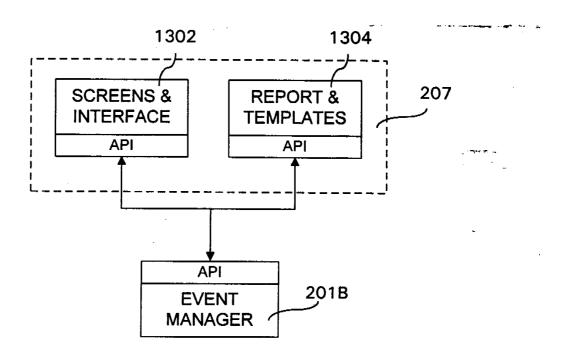


FIG. 13

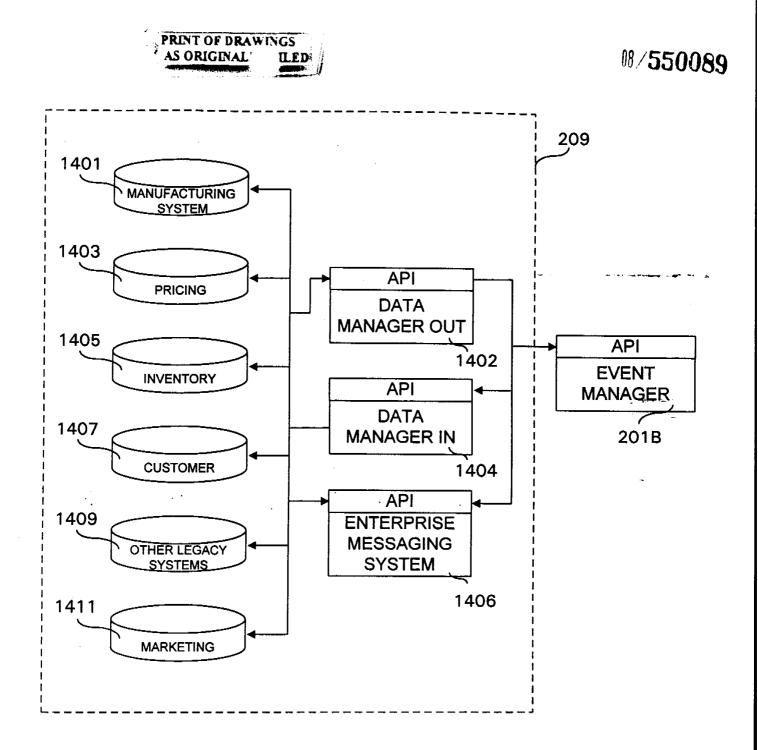


FIG. 14

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	Time With Customer	Self Management	Training	Pre-Sales	Order Management	Customer Retention	Sales Management
Local Information Storage	C P C Q F L P P U r o u i i r r s o n o n f o e t d f t a e p s o u i e n C o e m c g c y s n e t u e c a t r r l l a a e t t i i i o	O S C F T T R C P C O O O O O O O O O O O O O O O O O	S P S y r k s o i t d I e u I m c s	K L i e o a s d k s	or de residente de la constante de la constant	D i r e c t M k t	O C F C P O i O O P N N M M M M M M M M M M M M M M M M M
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FIG.15A

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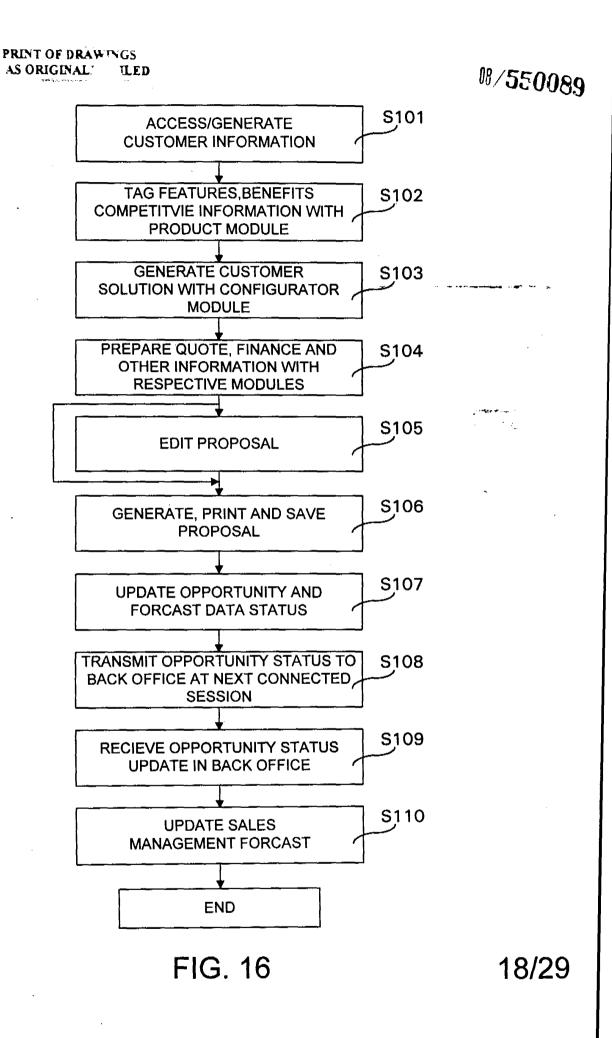
	Time With Customer	Self Management	Training	Pre-Sales	Order Management	Customer Retention	Sales Management
Local Information Storage	C P C Q F L P P	O S C F T T R C P C O O O O F E O P H N F D A F M O E t C O I E M F T U T U C S I I E N U I T T S N N I I N E S I T G C C I F N E S I T G C C I F N E S I T G C C I F N E S I T G C C I F N E S I T G C C I I F N E S I T G C C I I F N E S I T G C C I I F N E S I T G C C I I F N E S I T G C C I I I I I I I I I I I I I I I I I	y r k s o i t d l	K L e o a d k s	O C C C C C C C C C C C C C C C C C C C	r e c t M k	O C F C P O I O P N N M M M M M M M M M M M M M M M M M
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Dealer Option Descs Dealer Option Prices Dealer Option Codes Dealer Option Wights							

FIG.15B

## PRINT OF DRAWINGS AS ORIGINAL ILED



	Time With Customer	Self Management	Training	Pre-Sales	Order Management	Customer Retention	Sales Management
Local Information Storage	C P C Q F L P P	O S C F T T R C p c o o o r e o p h n r D a f m o e t c o i e m r d a a L n r u t u c s i i e n u l t t s n n i n e s i t g c c i r n t g	S P S y r k s o i t d ! e u ! m c s	K L i o o a s d k s	O r d e r S u b m i t	o t M k t	O C F C p o i o o n m o t a m t c c n u t i i n a t y i o n
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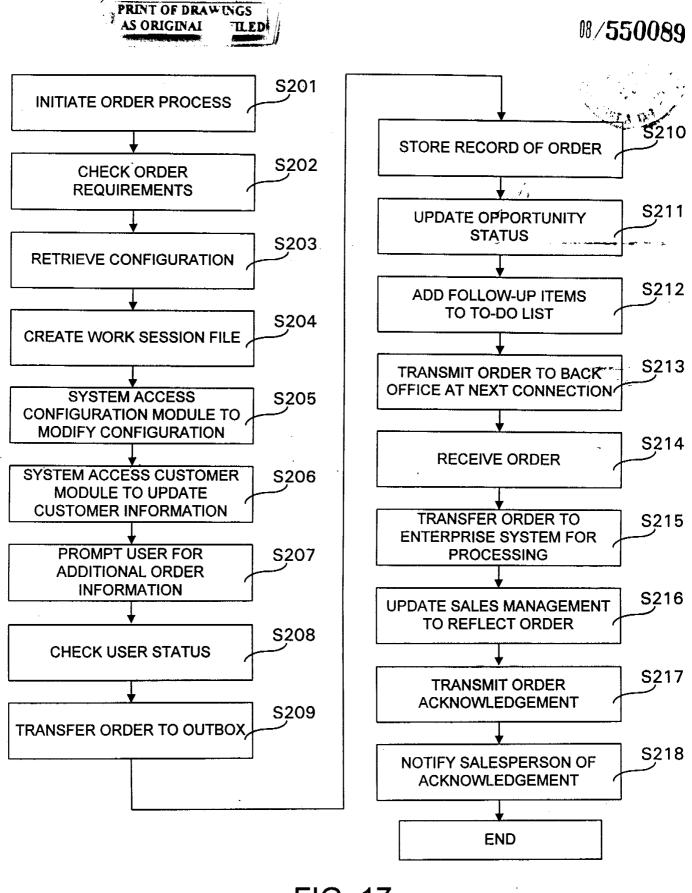


FIG. 17

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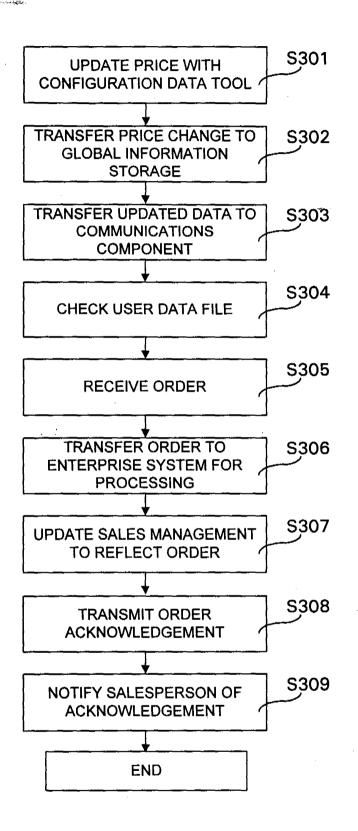


FIG. 18

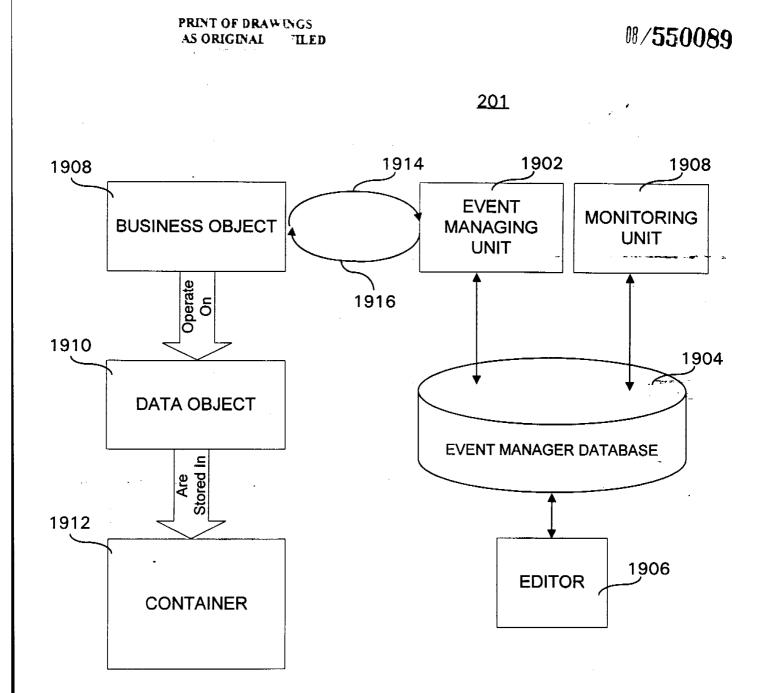


FIG. 19

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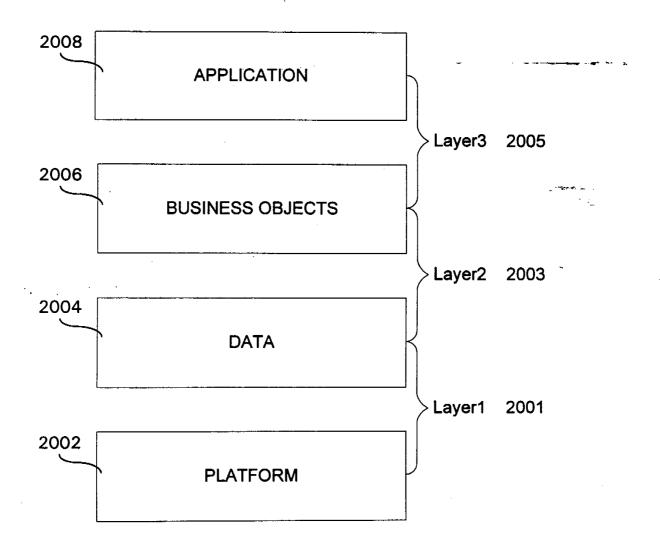


FIG. 20

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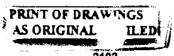
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Component	Event	Related Module	"Paired" Event - System Intelligence			
Pre-Sales (Lead Management)	a) Salesperson identifies leads for particular products	Contact Management	Linked to 1(d) and 1(e) to bring leads to the salesperson and to 3(a, b, f,) to notify salesperson of the recommended actions and process			
	b) A directed mailing for a particular product is sent out	Contact Management, Product	Linked to 1(a), 2(a), and 2(c) to send out product information targeted at the specific market audience			
	c) Promotional materials on new incentive program for product are mailed out	Contact Management	Linked to 2(c), 2(h), and 5(a) to send out information on new incentive program to customers to which proposals for the product have been generated but an order is not yet submitted.			
	d) A customer contacts an Internet Web-site to get product information	Product	Linked to 1(a) and 3(a) to notify to salesperson of the contact and schedule a follow-up and to 2(a) to communicate known requirements directly to the sales person.			
	e) A customer uses a kiosk to gain information on a product or service and request follow-up call from company representative		Linked to 1(a) and 3(a) to notify to salesperson of the contact and schedule a follow-up and to 2(a) to communicate known requirements directly to the sales-person			
	f) Salesperson profiles the lead based on key criteria	Contact Management, Product	Linked to 2(a) and 1(d, e) to profile the client according to best recommended practices			
	g) Salesperson identifies a lead as "qualified" and begins the sales process to close the sale	Objective Management, Contact Management, Time Management	Linked to 3(a, i) to prompt the salesperson to schedule follow-up     Linked to 1(f) and 3(f) to assign an appropriate process with steps to close the sale     Linked to 3(d) and 7(a) to revise the forecast based on the new sales opportunity			
	h) Salesperson fails to make any initial contact or follow- up to a qualified lead		Linked to 7(b, c, e) to advise the sales manager of this inactivity.     Linked to 3(j) to automatically add a training element into the salesperson's curriculum and schedule			
2. Time With the Customer	Salesperson interacts with the customer to build a needs analysis	Contact Management, Configurator	Linked to 2(c-g) which enables the system to use the profile information to direct or limit available solutions			
	b) Salesperson presents product and service information (features and benefits) to the customer	Product	Linked to 3(f) to identify this step of the sales process as complete			
	c) Salesperson configures a product and service solution for a customer	Configurator				



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Component	Event	Related Module	"Paired" Event - System
2. Time With the Customer	d) Salesperson verifies the accuracy and applicability of the solution with business requirements and customer requirements	Configurator, Contact Management	Linked to 2(c), the system will prompt the salesperson for additional information to assure the best solution has been identified
_	e) Salesperson calculates a total cost of the solution for the customer based on quantity, discounts, taxes, programs, etc.	Quote	
	f) Salesperson identifies purchasing and financing options for the product(s) offered to the customer	Finance	
	g) Salesperson identifies delivery options and timing for the solution by reviewing available inventory or manufacturing slots	Inventory	in the state of th
	h) Salesperson prints a proposal for a customer	Proposal	• The system marks the sales step as complete (3f), recalculates the probability of closing the sale(3d, 7a) and prompts the salesperson to accept or confirm the schedule for the follow-up (3i).
	Salesperson presents the proposed product and service solution to other decision makers at the customer	Presentation	• The system marks the sales step as complete (3f), recalculates the probability of closing the sale(3d, 7a) and prompts the salesperson to accept or confirm the schedule for the follow-up (3i).
·	j) A salesperson frequently fails to offer creative finance options when proposing a finance payment for a product purchase		The system adds and schedules a required product training item to the training curriculum; linked to 6(a, b)
	k) A salesperson's frequency of proposing a particular product or service is below the geographic or divisional norm		The system adds and schedules a required product training item to the training curriculum; linked to 6(a, b)  The system adds and schedules a required product training temperature.

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Component	Event	Related Module	"Paired" Event - System Intelligence		
3. Self-Management	a) Salesperson qualifies a lead and schedules a customer visit .	Contact Management, Time Management	<ul> <li>Linked to 1(a, g) for lead qualification, 3(f) to assign a process for closing the sale, 3(i) to schedule the process steps, and to 3(d) and 7(a) to trigger a change to the calculated forecast</li> </ul>		
	b) Salesperson creates a prioritized list of contacts and customers	Objective Management			
-	c) Salesperson creates a list of active sales opportunities	Objective Management, Contact Management	Linked with 3(d) and 7(a) to calculate a forecast		
	d) Salesperson develops a forecast	Forecasting	Linked to all steps of the sales process and subsequently linked to 3(d) and 7(a) to calculate maintain an accurate forecast relative to process status		
	e) Salesperson identifies sales objectives	Objective Management	• Linked to 3(d, f) to track against the forecast and 3(c) to check status		
	f) Salesperson completes planned steps of a process related to closing a sale	Objective Management	Linked to all steps of the sales process and subsequently linked to 3(d) and 7(a) to calculate maintain an accurate forecast relative to process status		
	g) Salesperson calculates commission	Forecasting	Automated by links to sales manager 7(a-d)		
	h) Salesperson reports sales status and contact history to sales manager	Forecasting, Contact Management	Linked to all aspects of the sales process		
	Salesperson and customer generate an action item (task) for follow-up	Time Management	Linked to 3(i), 6(b-d), and 7(e)     Linked to other sales processes by     systematically identifying areas for     improvement and scheduling targeted     training		
	j) Salesperson schedules time to meet training requirements	Time Management, Training	Linked to 2(f) to automatically identify the date of pay-off		
	k) Salesperson schedules a sales call follow-up for sixty days before the end of a customers financing pay-off date		• The system adds and schedules a required skills training item to the training curriculum; linked to 6(a, b)		
	l) A salesperson's length of time to close a sales is significantly longer than the norm	,			

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Component	Ev	ent	Related Module	"Paired" Event - System Intelligence
3. Self-Management	m)	A salesperson's profit per sale is significantly lower than the norm		The system adds and schedules a required skills training item to the training curriculum; linked to 6(a, b)
4. Customer Retention	a)	Salesperson maintains a list of customers that have purchased product	Contact Management, Order Management	Linked to 5(a,b) to mark contacts and sales opportunities as current customers
	b)	Salesperson follows-up on customer satisfaction	Objective Management, Contact Management	Linked to-3(f) to track recommended steps to identify new opportunities at existing customers
	с)	Salesperson and customer work together to set expectations and plans for next 12 months (business/purchase/support plan)	Objective Management, Time Management	Linked to 3(b) to schedule follow-up activities
	d)	Customer directly contacts the manufacturer regarding a product problem	Contact Management	Associated with Contact Management which enables the salesperson to receive and share all information related to that customer's contact with the company - the system reacts to key events and series of events based on business rules to identify tasks
	e)	Customer brings the product to the dealer for service.	Contact Management	Associated with Contact Management which enables the salesperson to receive and share all information related to that customer's contact with the company - the system reacts to key events and series of events based on business rules to identify tasks
	f)	Marketing materials are sent to customers that have purchased a particular product regarding an available upgrade	Contact Management, Product	Linked to 5(a,b) and linked to 1(a) to identify Customer as a potential customer for upgrades for the product ordered and linked to 1(b) to automatically send out product upgrade mailing to the customer
5. Order Management	a)	Customer approves the proposal and signs the order	Order Management	The system marks the sales step as complete (3f), recalculates the probability of closing the sale(3d, 7a) and prompts the salesperson to accept or confirm the schedule for the follow-up (3i).
	b)	Salesperson creates and submits an order for a particular product for a customer	Order Management	Linked to 1(a) to identify Customer as a potential customer for accessories for the product ordered and linked to 1(b) to automatically send out product accessories mailing to the customer
	c)	Salesperson requests a change to an order already submitted	Order Management	Linked to 2(c) to reference configuration requirements and 3(d, g) to re-forecast sales and commissions

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Component	Event	Related Module	"Paired" Event - System Intelligence
5. Order Management	d) Customer requests to know delivery date for product and salesperson investigates order status	Order Management	
6. Training	a) Company's training department analyzes training requirements and develops training course and curriculum for product knowledge and skills improvement	Training	
	b) Sales manager analyzes training requirements, identifies available material and assigns a plan for training requirements to a salesperson	Sales Management, Training	Linked to 7(a-e) to evaluate training needs of salesperson and assign training elements and linked to 3(objective management and time management) to communicate, plan, and schedule the training plan
	c) Salesperson reads/reviews training material	Training	
	d) Salesperson completes a certification test	Training	<ul> <li>Linked to 3 to mark the step or task as complete and to 2(all) to allow access to elements of the Time with Customer functionality that requires certification prior to use.</li> </ul>
7. Sales Management	A sales manager reviews a sales person's forecast and compiles totals	Sales Management - Forecasting	System automatically notifies sales manager when sales persons' forecast falls behind goals
	b) A sales manager analyzes a salesperson's close ratio and other measurement criteria	Sales Management - Forecasting, Objective Management	
	c) Sales manager reviews best practices of successful sales personnel and communicate those practices to other sales persons		Linked to 3(f) to assign the recommended steps as a part of the objective management process
	d) Sales manager sets sales and territory goals for sales personnel	Objective Management, Forecasting	Linked to 3 to communicate requirements to salesperson
	e) Sales manager completes performance reviews of sales personnel by reviewing accomplishments, status, and sales.	Training, Objective Management	

PRINT OF DRAWINGS
AS ORIGINAL! ILED

**08/550089** 

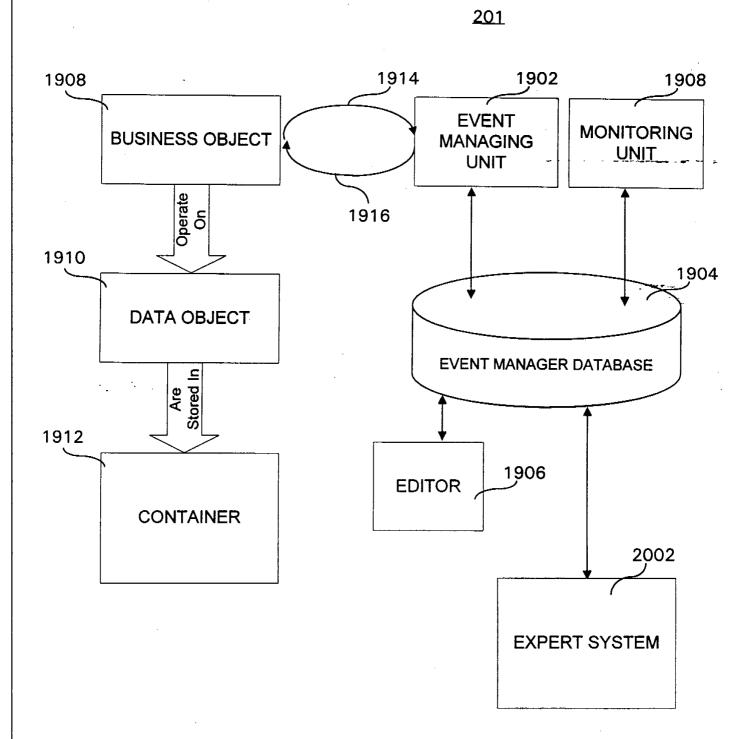
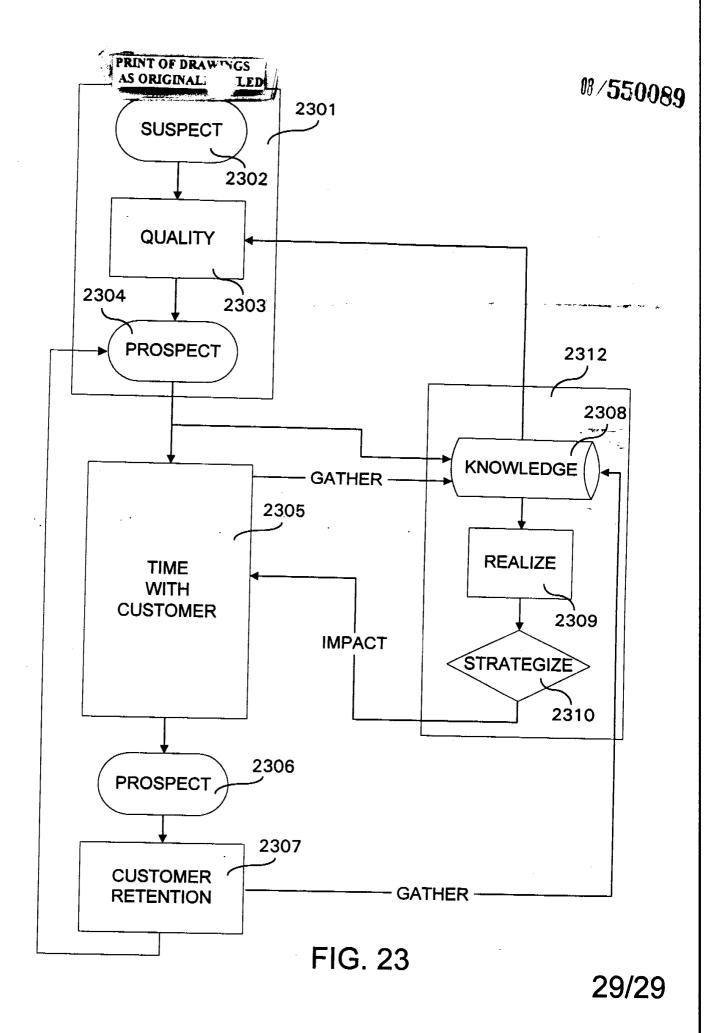


FIG. 22

28/29





75-201 765-205

# UNITED STATES DEPARTMENT OF COMMERCE Patent and Tredemark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS

Washington, D.C. 20231

APPLICATION NUMBER FILING DATE

08/550,089

FIRST NAMED APPLICANT

JOHNSON

JAM 4 ATTY, DOCKET NO /TITLE

0222/1228

J.

MERCHANT GOULD SMITH EDELL WELTER & SCHMIDT 3100 NORWEST CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS MN 55402-4131

10/30/95

0000

DATE MAILED:

12/28/95

7709.72US01

#### NOTICE TO FILE MISSING PARTS OF APPLICATION **FILING DATE GRANTED**

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted ALONG WITH \_\_for large entities or for small entities who have filed a verified statement claiming such status. The surcharge is set forth in 37 CFR 1.16(e).

If all required items on this form are filed within the period set below, the total amount owed by applicant as a [3] large 

-	FILI requir	NG DATE of this application, WHICHI	EVER IS LATER, usions of time may	THIS LETTER, OR TWO MONTHS FROM TO R, within which to file all required items and pay any fa ay be obtained by filing a petition accompanied by	ees					
	1. 💢	The statutory basic filing fee is: 🗵 entity, must submit \$7\$\(\sigma_0\)	missing 🗆 insu to complete t	ufficient. Applicant as a 🖂 large entity 🗆 sma the basic filing fee.	all					
	2. 🗆	Additional claim fees of \$ as a \sum large entity, \subseteq small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.								
		The oath or declaration: □ is missing.								
		$\square$ does not cover items omitted at t	ime of execution	n.						
		An oath or declaration in complian Application Number and Filing Da	ce with 37 CFR te is required.	1.63, identifying the application by the above	,					
	4. 🗆	The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.								
	5. Ø	The signature(s) to the oath or declaration is/are: M missing; D by a person other than the inventor or a person qualified under 37 CFR 1.42, 1.43, or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.								
	6. □	The signature of the following joint	t inventor(s) is n	missing from the oath or declaration:						
	<b>v.</b> <u>-</u>	An oath	or declaration l	listing the names of all inventors and signed on by the above Application Number and Filin	by g					
	7. 🗆	The application was filed in a lang translation of the application and a already been paid.	uage other than a fee of \$	n English. Applicant must file a verified Engl under 37 CFR 1.17(k), unless this fee l	ish 1as					
	8. 🗆	A \$processing (37 CFR 1.21(m)).	g fee is required	d since your check was returned without payn	ient					
,	9. 🗆	Your filing receipt was mailed in e	rror because you	our check was returned without payment.						
				ce Rules. See attached Notice to Comply with						
۸۵۸		O Distai 97 (PD 1 991 1 99	ith the bequence 5.	to to the control of						
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		1 ochacle	- T.VJ	65.00 CK						

Direct the response and any questions about this notice to, Attention: Application Processing Division, Special Processing and Correspondence Branch (703) 308-1202.

RE RETURNED WITH RESPONSE



# UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

APPLICATION NUMBER FILING DATE FIRST NAMED APPLICANT ATTY, DOCKET NO./TITLE

08/550,089

10/30/95

JOHNSON

J 7709.72US01

0222/1228

MERCHANT GOULD SMITH EDELL WELTER & SCHMIDT 3100 NORWEST CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS MN 55402-4131

0000

DATE MAILED:

#### NOTICE TO FILE MISSING PARTS OF APPLICATION FILING DATE GRANTED

12/28/95

37 CFR 1.16(e).

If all required items on this form are filed within the period set below, the total amount owed by applicant as a large entity, small entity (verified statement filed), is \$ \_\_\_\_\_.

Applicant is given ONE MONTH FROM THE DATE OF THIS LETTER, OR TWO MONTHS FROM THE FILING DATE of this application, WHICHEVER IS LATER, within which to file all required items and pay any fees required above to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).
1.  ☐ The statutory basic filing fee is: ☐ missing ☐ insufficient. Applicant as a ☐ large entity ☐ small entity, must submit \$ 750to complete the basic filing fee.
2. □ Additional claim fees of \$as a □ large entity, □ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
3. ☐ The oath or declaration: ☐ is missing. ☐ does not cover items omitted at time of execution.
An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date is required.
4.   The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
5. 🔀 The signature(s) to the oath or declaration is/are: 🗑 missing; 🗆 by a person other than the inventor or a person qualified under 37 CFR 1.42, 1.43, or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
6. $\square$ The signature of the following joint inventor(s) is missing from the oath or declaration:
An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.
7.  The application was filed in a language other than English. Applicant must file a verified English translation of the application and a fee of \$under 37 CFR 1.17(k), unless this fee has already been paid.
8.   A \$processing fee is required since your check was returned without paymen (37 CFR 1.21(m)).
9.   Your filing receipt was mailed in error because your check was returned without payment.
10. ☐ The application does not comply with the Sequence Rules. See attached Notice to Comply with Sequence Rules 37 CFR 1.821-1.825.
11. Other.  Markak
Direct the response and any questions about this notice to, Attention: Application Processing Division, Special Processing and Correspondence Branch (703) 308-1202.

A copy of this notice <u>MUST</u> be returned with the response. OFFICE COPY FORM PTO-1588 (REV, 11-93)

-#3/Prion Art -T. HcBeth-Brown 18/15/86

₩ 08/550,089

\_\_\_\_\_

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Jerome D. Johnson et al.

Examiner: N/A

Group Art Unit: N/A

**Se**rial No.:

October 30, 1995

08/550,089

Docket No.: 7709.72US01

Title:

Filed:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

SYSTEM

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on February 6, 1996;

William D. Miller

#### INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

#### Timing of Submission

This statement should be considered because it is submitted before the mailing date of a first Office Action on-the-merits, whichever occurred last. Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449, pursuant to 37 C.F.R. §1.97(b)(3).

# Concise Explanation of Relevance

All of the cited documents are in English.

No representation is made that a reference is "prior art"
within the meaning of 35 U.S.C. §§ 102 and 103. Moreover,
Applicants do not represent that a reference has been thoroughly

reviewed or that any relevance of any portion of a reference is intended, and reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish otherwise.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked as being considered and initialled by the Examiner, to the undersigned with the next official communication.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT, P.A. 3100 Norwest Center 90 South 7th Street Minneapolis, Minnesota 55402

(612) 371,-5310-

By: Will

William D. Miller Reg. No. 37,988

	Application No. 08/550,089	Applicant(s)  Jerome D. Johnson, et al.				
Interview Summary	Examiner William Hug	jhet	Group Art Unit 2411	I LIKURIUL ALIAKI AMAMA KANIMA INGKANA		
All participants (applicant, applicant's representative, P	PTO personnel):					
(1) William Hughet	(3)					
(2) William D. Miller						
Date of Interview May 28, 1997						
Type: 🛚 Telephonic 🗀 Personal (copy is given to	applicant ap	plicant's rep	presentative).			
Exhibit shown or demonstration conducted:   Yes	-					
Agreement 🛛 was reached. 🗌 was not reached.  Claim(s) discussed:						
Identification of prior art discussed:						
(A fuller description, if necessary, and a copy of the an the claims allowable must be attached. Also, where no is available, a summary thereof must be attached.)	nendments, if available, o copy of the amendent	which the es which wou	xaminer agreed ald render the cl	would render aims allowable		
1. 🛛 It is not necessary for applicant to provide a se	eparate record of the sul	stance of t	ne interview.			
Unless the paragraph above has been checked to indica LAST OFFICE ACTION IS NOT WAIVED AND MUST IN Section 713.04). If a response to the last Office action FROM THIS INTERVIEW DATE TO FILE A STATEMENT	ICLUDE THE SUBSTANG n has already been filed,	CE OF THE I APPLICAN	NTERVIEW. (Se T IS GIVEN ONE	ee MPEP		
<ol> <li>Since the Examiner's interview summary above each of the objections, rejections and requirem claims are now allowable, this completed form Office action. Applicant is not relieved from pr is also checked.</li> </ol>	ents that may be present is considered to fulfill the	nt in the last ne response	requirements of	and since the f the last		
Examiner Note: You must sign and stamp this form unless it is	an attachment to a signed (	Office action.				
6. Patent and Trademark Office O-413 (Rev. 10-95)	erview Summary			Paper No. 4		

# Fax Cover Sheet

# U.S. Patent & Trademark Office

2121 Crystal Drive Crystal City, Virginia 22202



# Art Unit 2411

Date: May 29, 1997

To:

William D. Miller Merchant, Gould, Smith, Edell, Welter & Schmidt, P.A. (612) 332-5300 (612) 332-9081

## From:

William N. Hughet (703) 305-9770 (703) 305-9731 (fax)

Re: Application No. 08/550,089 Docket No. 7709.72USA01

Interview summary of May 28, 1997 telephone conversation.

Number of pages (including this cover sheet):  $\underline{2}$ 

If you have not received all of the pages of this transmission, please contact me.

S/N 08/550,089

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Jerome D. Johnson et al.

Examiner: N/A

Serial No.: 08/550,089

Group Art Unit: N/A

Filed:

October 30, 1995

Docket No.:

7709.72US01

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

SYSTEM

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on February 6, 1996;

#### INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

#### Timing of Submission

This statement should be considered because it is submitted before the mailing date of a first Office Action on-the-merits, whichever occurred last. Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449, pursuant to 37 C.F.R. §1.97(b)(3).

# Concise Explanation of Relevance

All of the cited documents are in English.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103. Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended, and reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish otherwise.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked as being considered and initialled by the Examiner, to the undersigned with the next official communication.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT, P.A. 3100 Norwest Center 90 South 7th Street Minneapolis, Minnesota 55402

(612) 371,-5310

\_\_\_

By: William D. Miller

Reg. No. 37,988

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

JOHNSON et al.

Examiner:

W. Hughet

Serial No.:

08/550,089

Group Art Unit:

2411

ruea:

Oct. 30, 1995

Docket: Batch No.: 7709.72US01

Notice of

Due Date:

Allow. Date:

n/a

n/a

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM

Attn: Examiner William Hughet
Assistant Commissioner for Patents

Washington, D.C. 20231

Sir

We are transmitting herewith the attached:

Other: Communication and Resubmission of Information Disclosure Statement, PTO-1449 and cited art

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT 3100 Norwest Center, Minneapolis, MN 55402 (612) 332-5300

Name: William D. Mille

Reg. No.: 37,988 WDM/PST/dhr

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

JOHNSON et al.

Examiner:

W. Hughet

Serial No.:

08/550,089

Group Art Unit:

2411

Filed:

Oct. 30, 1995 n/a

Docket:

7709.72US01

Notice of

Allow. Date:

Batch No.:

n/a

Due Date:

Title:

n/a

\_

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM

Attn: Examiner William Hughet Assistant Commissioner for Patents Washington, D.C. 20231

Sir

We are transmitting herewith the attached:

□ Transmittal Sheet in duplicate containing Certificate of Mailing

Other: Communication and Resubmission of Information Disclosure Statement, PTO-1449 and cited art

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT 3100 Norwest Center, Minneapolis, MN 55402 (612) 332-5300

Name: William D. Miller

Reg. No.: 37,988 WDM/PST/dhr S/N 08/550,089

PATENT

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

JOHNSON et al. Examiner:

Serial No.: 08/550,089

Group Art Unit:

2411

Filed:

Oct. 30, 1995

Docket No.:

7709.72US01

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

SYSTEM

#### COMMUNICATION

Assistant Commissioner for Patents Attention: Examiner William Hughet Washington, D.C. 20231

Dear Sir:

Further a teleconference of May 28, 1997, between Examiner William Hughet and the undersigned Applicants' Representative, and in response to the Interview Summary of May 28, 1997, Applicants' Representatives enclose a resubmission of the Information Disclosure Statement and PTO-1449 filed with the United States Patent and Trademark Office on February 6, 1996, with enclosure of the cited prior art.

Applicants' Representatives also enclose a copy of the postcard date-stamped February 8, 1996, which indicates USPTO receipt of the Information Disclosure Statement, Form 1449 and cited references.

The Examiner is invited to contact Applicants'
Representatives, at the below listed telephone number, if it is believed the prosecution of this application may be assisted thereby.

Respectfully submitted,

J. JOHNSON et al.

By their Representatives,

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT, P.A. 3100 Norwest Center 90 South Seventh Street Minneapolis, MN 55402 612/332-5300

Dir

Reg. No. 37,988 WDM/PST/dhr



# UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	AT	ATTORNEY DOCKET NO.		
08/550,0	189 10/30	/95 JOHNSON	J	7709.72US01		
-		B3M1/0610 →	EX	EXAMINER		
	MERCHANT GOULD SMITH EDELL WELTER & SCHMIDT			HUGHET, W		
3100 NOR	WEST CENTER		ART UNIT	PAPER NUMBER		
	LIS MN 5540		2411			
			DATE MAILED:	06/10/97		

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

	Application No. 08/550,089	1	Applicant(s) e D. Johnson, David R. Lundberg, Michael P. Krel			
Office Action Summary	Examiner William Hu	_ <u></u>	Group Art Unit 2411			
X Responsive to communication(s) filed on Oct 30, 1995	5	····				
☐ This action is <b>FINAL</b> .						
Since this application is in condition for allowance exceed in accordance with the practice under Ex parte Quayle			on as to the me	rits is closed		
A shortened statutory period for response to this action is is longer, from the mailing date of this communication. Fapplication to become abandoned. (35 U.S.C. § 133). E. 37 CFR 1.136(a).	ailure to respond wit	hin the perio	d for response	will cause the		
Disposition of Claims						
X Claim(s) 1-20		is,	are pending in t	he application.		
Of the above, claim(s)		is/ar	e withdrawn fro	m consideration.		
☐ Claim(s)			is/are allowe	ed.		
X Claim(s) 1-20				ed.		
☐ Claim(s)				ed to.		
☐ Claims				on requirement.		
The drawing(s) filed on	is ner.  riority under 35 U.S.  pies of the priority de al Number)  m the International B  priority under 35 U.S.	C. § 119(a)- ccuments had	(d). ave been  Rule 17.2(a)).			
Notice of Informal Patent Application, PTO-152						
SEE OFFICE ACTION	N ON THE FOLLOWING	G PAGES				

Office Action Summary

Part of Paper No. 6

U. S. Patent and Trademark Office PTO-326 (Rev. 9-95)

Art Unit: 2411

#### Part III DETAILED ACTION

#### **Drawings**

- 1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.
- 2. The drawings are objected to because of irregularities as noted on PTO 948, enclosed. Appropriate correction is required.

#### Claim Objections

3. Claim 11 is objected to regarding duplication of the phrase, "for use in".

# Claim Rejections - 35 USC § 112

- 4. Claims 14 16 and 18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- (A) Claim 14 depends back to itself. Applicants likely intended Claim 14 to depend back to Claim 13, and the application has been examined on this basis.
- (B) Claim 14 recites determining whether an event has occurred prior to the first event, the latter being recited in Claim 13. However, the Examiner asserts that, by definition, a first event is the beginning event of the sales process and cannot be preceded by a prior event.
- (C) Claims 15 and 16 depend on Claim 14 and recite a first and second subsystem. However, Claim 14 does not recite a first or second subsystem, so there is insufficient antecedent basis for these limitations in Claims 15 and 16. Applicants likely intended these claims to depend on Claim 13, and the Examiner has reviewed the application on this basis.

-2-

Art Unit: 2411

(D) Claim 18 depends on Claim 19. Applicants likely intended Claim 18 to depend back to Claim 17, and the application has been examined on this basis.

### Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

- 6. Claims 1 8 and 10 20 are rejected under 35 USC § 103 as being unpatentable over Tom Negrino, "Sales-Automation Software", Macworld, v 10, n 10, pages 144 148, October, 1993 (hereinafter "Negrino") in view of Tony Seideman, "Way Cool! (Sales Force Automation)", Sales & Marketing Management, v 146, n 6, pages 10 13, June, 1994 (hereinafter "Seideman"), and further in view of John Hiatt, "Empowering the Global Sales Force", International Business, v 7, n 9, pages 16 20, September, 1994 (hereinafter "Hiatt").
- (A) As to Claim 1, Negrino discloses a computer-based sales automation system that is used to facilitate a sales process. Negrino teaches a plurality of subsystems, each corresponding to a step in the sales process and each facilitating that

-3-

Art Unit: 2411

respective sales step. Negrino also discloses an automated branching, or event, manager that automatically initiates the next step in the automated sales process based on recognition of occurrence of a prior step.

-4-

Negrino differs from the invention by not expressly teaching the sequence of subsystems being initiated as "first" followed by "second". However, the Examiner asserts that both Negrino and the invention teach a sequence of logical steps, each initiated as a result of a prior step and that by arbitrarily designating a particular step as "first", it would follow that the next step initiated by the system would be the "second" step. It would therefore have been obvious to one of ordinary skill in the art of sales force automation systems to denote an initial sales subsystem step as "first", to be followed by a successive subsystem step designated "second" in order to identify the relative sequence between the two subsystem steps.

- (B) As to Claim 2 and 3, Negrino discloses that the context in which the current (recognized) task (event) occurs is a function of the occurrence of a prior event. Although Negrino does not expressly disclose available information related to a given step, it does disclose the automatic logging of information upon occurrence of events. The Examiner asserts that in order to log such information, the contextual environment of each step must necessarily include the related information which the system subsequently records in a central database. The Examiner further asserts that it would have been obvious to one of ordinary skill in the art to include information with respect to occurrence of a previous step in the automated sales/branching system disclosed by Negrino. One would be motivated to do so in order to have sufficient information with which to verify that the prior step had satisfactorily completed prior to initiating the subsequent step.
- (C) As to Claim 4, while Negrino does not teach a rule-based sales automation system, Seideman does disclose an expert sales automation system in

Art Unit: 2411

which rules direct the next recommended action to be taken, upon occurrence of a given event or step. Although Seideman does not expressly disclose storing a plurality of rules, expert systems are well known to be comprised of a stored knowledge base of rules in conjunction with an inference engine that enables the system to make decisions and direct actions based on contextual knowledge (information) and rules defined by experts in the field. See Computer Dictionary, Microsoft Press, 156, (Second Ed., 1994).

-5-

Although Seideman does not disclose identifying an express rule governing response to an event, the Examiner asserts that expert systems are well known to initiate a subsequent step upon being provided a relevant knowledge base and contextual information regarding the present event. It would have been obvious to one of ordinary skill in the art to modify Negrino with the expert system of Seideman. One would be motivated to do so in order to incorporate the well-known dynamic learning means of expert systems into the sales automation system of Negrino, and thereby permit Negrino's system to solve problems and initiate events based on the experience and rules of experts with minimal manual intervention.

- (D) As to Claim 5, Negrino teaches an initial event of spending time with a customer in the form of learning about the prospect's needs and making a sales presentation, with the intent of converting an initial lead into a closed sale. Negrino further discloses a lead management subsystem. Although Negrino does not expressly teach using the lead management subsystem in converting a name to a potential customer, the Examiner asserts that a primary goal of a sales system is to make a sale, which necessarily requires converting initial leads, or prospects, into buying customers.
- (E) As to Claim 6, while Negrino does not teach an order management system for ensuring that the ordered product or service is delivered, Hiatt discloses a sales automation system that provides for automatic entry of orders and subsequent

Art Unit: 2411

shipment of flawless orders to the customer. It would have been obvious to modify Negrino with the order management subsystem of Hiatt in order to ensure timely and accurate order shipments. One would be motivated to do so in order to deliver that which was promised to the customer and in order to preserve the order. The remaining limitations of Claim 6 are found in Claim 5, and the remainder of this claim is rejected for the same reasons.

-6-

- (F) As to Claim 7, Negrino discloses a customer retention subsystem that includes post-sale contacts, letters, and meetings with clients for building a relationship with an existing customer for future sales. The remaining limitations of Claim 6 are found in Claim 5, and the remainder of this claim is rejected for the same reasons.
- (G) As to Claim 8, Negrino teaches a self management subsystem of customer contact management, to-do lists, calendars, and schedulers for assisting the salesperson in fulfilling his/her sales responsibilities. The remaining limitations of Claim 6 are found in Claim 5, and the remainder of this claim is rejected for the same reasons.
- (H) As to Claim 10, Negrino teaches a sales management subsystem that includes sales plans that implement enterprise-wide strategies and means for implementing said plans. The remaining limitations of Claim 6 are found in Claim 5, and the remainder of this claim is rejected for the same reasons.
- (I) The limitations of Claim 11 are found in Claims 6 and 8, and this claim is rejected for the same reasons.
- (J) The limitations of Claim 12 are found in Claims 5 and 8, and this claim is rejected for the same reasons.
- (K) As to Claim 13, and as discussed above regarding Claim 1, while Negrino does not expressly teach facilitating a first event within a first subsystem of a computer-based system, it does teach an automated, computer-based sales system that

Art Unit: 2411

spells out every step of the sales process and directs subsequent steps based on the outcome of the immediately previous step. The Examiner asserts that any such sequence of steps within a plurality of subsystems as disclosed by Negrino necessarily has a beginning, or first, step and beginning, or first, subsystem. Otherwise, Negrino would have no starting point from which the sales process would be facilitated as taught within the Negrino publication. The remaining limitations of Claim 13 are found in Claim 1, and the remainder of this claim is rejected for the same reasons.

- (L) As to Claim 14, and as discussed above regarding Claims 2 and 3, Negrino teaches performance of events based on the occurrence of prior events. Although Negrino does not expressly disclose determining whether or not such prior events occurred, the Examiner asserts that such a determination would have been obvious prior to the initiation of a subsequent, dependent event. To do otherwise, would render the sequential dependency of events as disclosed by Negrino meaningless. Although Negrino does not disclose determining whether the prior event was part of the context of the first event, the Examiner asserts that recitation of "first" event is merely selection of one of a plurality of possible events within the sales process. The remaining limitations of Claim 14 are found in Claims 2 and 3, and the remainder of this claim is rejected for the same reasons.
- (M) The limitations of Claim 15 are found in Claims 1 and 6, and this claim is rejected for the same reasons.
- (N) The limitations of Claim 16 are found in Claims 1 and 5, and this claim is rejected for the same reasons.
- (O) As to Claim 17, and as discussed above regarding Claim 1 and 4, Negrino discloses a computer-based sales automation system that is used to facilitate the sales process. Although Negrino does not teach "electronically" facilitating sales events, Negrino does disclose use of computers with which to direct events, and the

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Art Unit: 2411

Examiner asserts that computers are well known to be powered by electricity. While Negrino does not expressly disclose linking to subsequent steps based on prior experience, it does disclose linking to subsequent steps based on the occurrence of prior steps. Also, Seideman teaches incorporating prior sales experience with which to direct the operation of the automated system. It would have been obvious to modify Negrino with the experience means of Seideman. One would be motivated to do so to take advantage of existing practical knowledge within the sales process so as to avoid prior mistakes and to use past successful sequences of events and subsystems with which to close a sale. The remaining limitations of Claim 17 are found in Claims 1 and 4, and the remainder of this claim is rejected for the same reasons.

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- (P) As to Claims 18,19, and 20, although Negrino does not disclose an expert system, Seideman does disclose an expert sales automation system that uses prior sales experience with which to build rules to drive the system. As discussed above regarding Claim 4, expert systems are well known to be comprised of knowledge bases of rules that represents expert experience in the field, and Seideman teaches learning from the sales process so as to implement strategies that will work best and further teaches guiding the system to direct the most efficient courses of action. Although Seideman does not expressly disclose monitoring sales process events, the Examiner asserts that it would have been obvious, in view of Seideman, for an expert system to monitor those events comprising the system so as to "learn" what works and what leads to undesirable results and incorporate that knowledge in the expert system's well-known knowledge base. It would have been obvious to modify Negrino with the expert system of Seideman for the reasons discussed regarding claim 4.
- 7. Claim 9 is rejected under 35 USC § 103 as being unpatentable over Tom Negrino, "Sales-Automation Software", Macworld, v 10, n 10, pages 144 148,

Art Unit: 2411

October, 1993 (hereinafter "Negrino") in view of Colleen Frye, "Automation Integrating Phases of Sales Cycle", Software Magazine, v 13, n 14, pages 61 - 72, September, 1993 (hereinafter "Frye").

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As to Claim 9, Negrino discloses a computer-based sales automation system that is used to facilitate the sales process, said system being comprised of a plurality of subsystems, each corresponding to a step in the sales process and each facilitating that respective sales step. Although Negrino does not teach a training subsystem, Frye does disclose a sales force automation system in which the users (salespersons) are trained on the system. Although Frye is not clear whether or not the system actually does the training, the Examiner asserts that, in view of Frye and the well-known benefits that accrue from a well-trained staff, it would have been obvious to one of ordinary skill in the art of sales automation systems to provide for systemdirected training of salespersons. One would be motivated to do so in order to take advantage of the automation and the knowledge (rules) built into the system to detect the progress of each individual salesperson and to provide training information relevant to his/her particular experience level and products being sold. One would be further motivated to do so to automatically load updated product information into the databases disclosed by Negrino and Frye to provide the salespersons with up to date information.

### Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Hughet, whose telephone number is (703) 305-9770. The examiner can be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

Art Unit: 2411

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gail Hayes, can be reached at (703) 305-9711. The fax phone number for this Group is (703) 305-9731.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

William N. Hughet

June 04, 1997

(08550089.AC1)

GAIL O. HAYES SUPERVISORY PATENT EXAMINER GROUP 2400

-10-

S/N 08/550,089

**PATENT** 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Johnson et al.

Examiner:

W. Hughet

08/550,089

Group Art Unit:

2411

Title:

October 30, 1995

Docket No.:

7709.72US01

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on December 10, 1997.

## PETITION FOR EXTENSION OF TIME

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

In accordance with the provisions of 37 C.F.R. §1.136(a), it is respectfully requested that a 3-month extension of time be granted in which to respond to the outstanding Office Action mailed June 10, 1997, said period of response being extended from September 10, 1997 to December 10, 1997.

Our check in the amount of \$475.00 is enclosed to cover the required extension fee for a

2/1997 BALEXAND 00000034 08550089 475.00 OP

Respectfully submitted,

Merchant, Gould, Smith, Edell,

Welter & Schmidt, P.A. 3100 Norwest Center

90 South Seventh Street

Minneapolis, MN 55402

612/332-**3**30Ø

John P Summer Reg. No. 29,114

JPS:PST:slc

S/N 08/550,089

PATENT

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: JOHNSON et al. Examiner:

W. Hughet

Serial No.: 08/550,089

Group Art Unit: Unassigned

Filed:

Oct. 30, 1995

Docket No.:

7709.72US01

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

SYSTEM

COURTESY COPY OF INFORMATION DISCLOSURE STATEMENT, FORM 1449 AND CITED REFERENCES submitted on February 6, 1996

Receipt is hereby acknowledged for the following in the U.S. Patent and Trademark Office:

Jerome D. Johnson et al.

Applicant: Serial No.: Filed:

Applicant: Jerome D. Johnson et al.
Serial No.: 08/550,089
Filed: October 30, 1995
Docket: 7709.72US01
Title: INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM
Small entity status has been previously submitted
Information Disclosure Statement, Form 1449 and cited references.
Transmittal Sheet, in duplicate, containing certificate under 37 CFR 1.8

WDM:bkh Patent

Due Date: -Date Mailed: February 6, 1996

Receipt is hereby acknowledged for the following in the U.S. Patent and Trademark Office:

Applicant: Jerome D. Johnson et al.

Serial No.: 08/550,089

Filed: October 30, 1995

Docket: 7709.72US01

Title: INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM

Small entity status has been previously submitted

Information Disclosure Statement, Form 1449 and cited references.

Transmittal Sheet, in duplicate, containing certificate under 37 CFR 1.8

WDM:bkh

Date Medico, February 1996

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Jerome D. Johnson et al.

Examiner:

N/A

Serial No.:

08/550,089

October 30, 1995

Group Art Unit:

7709.72US01

Filed:

Notice of Allow. Date:

Batch No .:

Docket:

N/A

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION SYSTEM

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

We are transmitting herewith the attached:

#### CLAIMS AS AMENDED

CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE		FEE
TOTAL CLAIMS:	-		-		x	s	_	S
INDEPENDENT CLAIMS:			-		x	s		\$
MULTIPLE DEPENDENT CLAIM FEE								s
TOTAL FILING FEE								s

Small entity status has been previously submitted

Information Disclosure Statement, Form 1449 and cited references.

Return postcard

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 6th day of February, 1996.

MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT

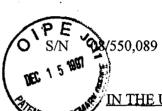
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Reg. No.: 37,988 WDM:bkh



PATENT

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Johnson et al.

Examiner:

W. Hughet

Serial No.:

08/550,089

Group Art Unit:

2411

Filed:

October 30, 1995

Docket No.:

7709.72US01

Title:

INTEGRATED COMPUTERIZED SALES FORCE AUTOMATION

**SYSTEM** 

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on December 10,1772.

By: Name: SUSAN CSEEK

## **AMENDMENT**

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

This Amendment is submitted in response to the non-final Office Action dated June 10, 1997.

Please amend the above-identified application as follows.

# IN THE SPECIFICATION

Page 3, line 13, delete "proces", insert --process-- therefor.

Page 6, line 22, delete "is", insert --are-- therefor.

Page 34 line 34, delete "effect", insert --affect-- therefor.

Page 38, line 14, delete "are", insert --is-- therefor.

Page 47, line 3, delete "mangers", insert --managers-- therefor.

Page 61, line 1, delete "paring", insert --pairing-- therefor.

#### IN THE CLAIMS

# Please amend the claims as follows:

1. (AMENDED) A computer implemented sales system used to facilitate a sales process, the system comprising:

a plurality of subsystems <u>configured to facilitate</u> [each corresponding to a phase of the sales process and facilitating] one or more <u>actions performed during</u> [events occurring in] <u>at least one</u> [the corresponding] phase of the sales process; and

an event manager, coupled to [each of] the subsystems, the event manager

detecting one or more changes in state characteristic of [recognizing] an event occurring within the system [carried out by a first subsystem of the plurality of subsystems],

inferring occurrence of the event and [determining] a context in which the [recognized] event occurred based at least in part on the detected changes in state [occurs], and

automatically initiating an operation in one or more particular [a second] subsystems of the computer [plurality of subsystems] to facilitate a new action [event] based on the inferred context [in which the recognized event occurs].



- 2. (AMENDED) A system as recited in claim 1, wherein the <u>inferred</u> context [in which the recognized event occurs] includes information related to <u>at least one</u> [a] phase of the sales process [in which the recognized event occurs].
- 3. (AMENDED) A system as recited in claim 1, wherein the <u>inferred</u> context [in which the recognized event occurs] includes information related to whether a previous event has occurred in the sales process.
  - 4. (AMENDED) A system as recited in claim 1, further comprising:
- a first memory storing a plurality of rules, each rule indicating at least one subsequent action to be taken by a subsystem of the sales system upon occurrence of a corresponding event occurring in a particular context; and
- a decision subsystem configured to [means for] identify[ing] a rule stored in said first memory corresponding to the <u>inferred</u> context [in which the recognized event occurred] and for initiating the operation in the <u>particular</u> [second] subsystem based on the identified rule.
- 5. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:
- a time with customer subsystem <u>configured to convert</u> [for use in converting] a lead to a <u>buying customer</u>, <u>so as to close</u> [thereby closing] a sale;[,] and

[the second subsystem comprises] a lead generation [management] subsystem configured to convert [for use in converting] a name to a potential customer.

6. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a time with customer subsystem <u>configured to convert</u> [for use in converting] a lead to a <u>buying customer</u>, <u>so as to close</u> [thereby closing] a sale;[,] and

[the second subsystem comprises] an order management subsystem configured to convert [for use in converting] the sale such that a product or service delivered matches a product or service sold.

7. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a time with customer subsystem <u>configured to convert</u> [for use in converting] a lead to a <u>buying</u> customer, <u>so as to close</u> [thereby closing] a sale;[,] and

[the second subsystem comprises] a customer retention subsystem configured to convert [for use in converting] an existing customer into a lead, so as to generate [thereby gaining] repeat sales.

8. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a time with customer subsystem <u>configured to convert</u> [for use in converting] a lead to a <u>buying customer and prompting the buying customer to make a buying decision</u>, so as to close [thereby closing] a sale;[,] and

[the second subsystem comprises] a self management subsystem configured to assist [for use in assisting] a salesperson in managing [their own] sales information.

9. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a time with customer subsystem <u>configued to convert</u> [for use in converting] a lead to a <u>buying</u> customer, <u>so as to close</u> [thereby closing] a sale;[,] and

[the second subsystem comprises] a training subsystem configured to provide [for use in providing] training to a salesperson.

10. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a time with customer subsystem configured to convert [for use in converting] a lead to a buying customer, so as to close [thereby closing] a sale;[,] and

[the second subsystem comprises] a sales management subsystem configured to assist [for use in assisting] a sales manager in managing a plurality of salespeople.



11. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

an order management subsystem <u>configured to ensure</u> [for use in for use in ensuring] that a product or service delivered matches a product or service sold; and

[the second subsystem comprises] a self management subsystem configured to assist [for use in assisting] a salesperson in managing [their own] sales information.



12. (AMENDED) A system as recited in claim 1, wherein the <u>plurality of [first]</u> subsystems comprises:

a lead management subsystem configured to manage a conversion of a lead to a prospect and of the prospect to a buying customer [for use in converting a lead to a customer]; and

[the second subsystem comprises] a self management subsystem configured to assist [for use in assisting] a salesperson in managing [their own] sales information.

13. (AMENDED) A method of facilitating a sales process using a computer arrangement having [configured to have] a plurality of subsystems configured to facilitate one or more actions performed during at least one [, each corresponding to a] phase of the sales process[, in order to facilitate an event occurring in a related phase of the sales process], the method comprising the steps of:

- [(a) facilitating a first event occurring in the sales process using a first subsystem of the computer;]
- [(b)] automatically detecting one or more changes in state characteristic of an [the occurrence of the first] event occurring in the sales process; [and]

inferring occurrence of the event and [determining] a context in which the [first] event occurred based at least in part on the detected changes in state; and

[(c)] automatically initiating an operation in one or more particular [a second] subsystems of the computer to facilitate a new action [event] based on the inferred context [in which the first event occurred].

(AMENDED) A method as recited in claim 13, further comprising [14, wherein the determining step (b) comprises] the steps of:

determining whether a prescribed event [has previously] occurred in the [a] sales process [event] prior to [occurrence of] the inferred [first] event; and

indicating as at least part of the inferred context whether the prescribed event has previously occurred [as at least part of the context in which the first event occurred].





(AMENDED) A method as recited in claim 13. further comprising the steps of: [14, wherein the first subsystem is used to facilitate]

inferring the occurrence of an event [occurring] while a salesperson is with a customer; and

using the particular [second] subsystem [is used] to facilitate an action taken [event occurring] while managing an order made by [with] the customer.

16. (AMENDED) A method as recited in claim 13, further comprising the steps of: [14, wherein the first subsystem is used to facilitate]

inferring occurrence of an event [occurring] while converting a name into a customer; and

using the particular [second] subsystem [is used] to facilitate an action taken [event occurring] while a salesperson is with the customer.

(AMENDED) A computer implemented sales system used to facilitate a sales process, the system comprising:

a plurality of subsystems <u>configured to</u> [each] electronically <u>facilitate actions</u>

<u>performed during</u> [facilitating an event occurring in] the sales process; and

an event manager coupled to [each of] the [plurality of] subsystems and configured to

detect one or more changes in state characteristic of an event occurring in the system,

infer [detect the] occurrence of the [a first] event [in the sales process] and a context in which the event occurred based at least in part on the detected changes in state,

[to] link the <u>inferred</u> [first] event [in the sales process] with <u>an action</u> to be performed during [a second event in] the sales process based on prior sales experience using the sales system, and

[to] automatically initiate an operation using one <u>or more</u> of the plurality of subsystems to facilitate the <u>action to be performed based on the inferred context</u> [second event].

18. (AMENDED) A system as recited in claim 17 [19], wherein the event manager comprises an expert system.

(AMENDED) A system as recited in claim 17 [19], wherein the event manager comprises an expert system configured [provided] to

automatically monitor events occurring in the sales process,

[to] identify which events lead to a desired outcome in a use of the sales system, and

[to] produce a knowledge database for use in subsequent operations as the prior sales experience using the sales system.

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20: (AMENDED) A system as recited in claim 19 [20], wherein the expert system comprises:

a knowledge database <u>configured to store</u> [storing] information related to the prior sales experience using the sales system;

means for realizing an [the] implication of the information stored in the knowledge database; and

means for strategizing a desirable subsequent action based on the implication of the information stored, wherein the operation automatically initiated by the event manager carries out the desirable subsequent action.

Please add the following new claims.

21. (NEW) A system as recited in claim 1, wherein the inferred event is the occurrence of a phase of the sales process.

i't (NEW) A system as recited in claim 1, wherein the inferred event is distributed among at least two of the plurality of subsystems.

23. (NEW) A system as recited in claim 22, wherein the inferred context includes information related to the subsystems among which the inferred event is distributed.

24. (NEW) A system as recited in claim 23, wherein the inferred context includes an identification of the subsystems among which the inferred event is distributed.

(NEW) A system as recited in claim 1, wherein the inferred event is contained within one of the plurality of subsystems.

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26. (NEW) A system as recited in claim 25, wherein the inferred context includes information related to the subsystem in which the inferred event is contained.

27. (NEW) A system as recited in claim 26, wherein the inferred context includes an identification of the subsystem in which the inferred event is contained.

rd oc

28. (NEW) A method as recited in claim 13, wherein the inferred context includes information related to at least one phase of the sales process.

29. (NEW) A method as recited in claim 13, wherein the inferred event is the occurrence of a phase of the sales process.

(NEW) A method as recited in claim 13, wherein the inferred event is distributed among at least two of the plurality of subsystems.

(NEW) A method as recited in claim 30, wherein the inferred context includes information related to the subsystems among which the inferred event is distributed.

(NEW) A method as recited in claim 31, wherein the inferred context includes an identification of the subsystems among which the inferred event is distributed.

33. (NEW) A method as recited in claim 13, wherein the inferred event is contained within one of the plurality of subsystems.

34. (NEW) A method as recited in claim 33, wherein the inferred context includes information related to the subsystem in which the inferred event is contained.

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35. (NEW) A method as recited in claim 34, wherein the inferred context includes an identification of the subsystem in which the inferred event is contained.

36. (NEW) A method as recited in claim 13, further comprising the steps of:

storing a plurality of rules in a memory, each rule indicating at least one subsequent action to be taken by a subsystem of the sales system upon occurrence of a corresponding event occurring in a particular context; and

identifying a rule corresponding to the inferred context; and initiating the operation in the particular subsystem based on the identified rule.

3/5 20 20 NEW) A method as recited in claim-13, further comprising the steps of:

inferring occurrence of an event while converting a name to a potential customer; and

using the particular subsystem to convert a lead to a customer.

(NEW) A method as recited in claim 13, further comprising the steps of: inferring occurrence of an event while converting a lead to a buying customer; and using the particular subsystem to convert an existing customer into a lead, so as to generate repeat sales.

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39. (NEW) A method as recited in claim 13, further comprising the steps of: inferring occurrence of an event while converting a lead to a buying customer and prompting the buying customer to make a buying decision; and

40. (NEW) A method as recited in claim 13, further comprising the steps of: inferring occurrence of an event while converting a lead to a buying customer; and using the particular subsystem to provide training to a salesperson.

using the particular subsystem to assist a salesperson in managing sales information.

At. (NEW) A method as recited in claim 13, further comprising the steps of: inferring occurrence of an event while converting a lead to a buying customer; and using the particular subsystem to assist a sales manager in managing a plurality of salespeople.

(NEW) A method as recited in claim 13, further comprising the steps of:

inferring occurrence of an event while ensuring that a product or service delivered matches a product or service sold; and

using the particular subsystem to assist a salesperson in managing sales information.

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(NEW) A method as recited in claim 13, further comprising the steps of:

inferring occurrence of an event while managing a conversion of a lead to a prospect and of the prospect to a buying customer; and

using the particular subsystem to assist a salesperson in managing sales information.

## **REMARKS**

Claim 11 was objected to regarding duplication of the phrase, "for use in." Accordingly, Applicants have deleted the duplicative language.

Claims 14-16 and 18 stand rejected under § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Applicants have considered the comments in the Office Action and have amended these claims in light of those comments. For example, the claims have been amended to reflect the proper dependencies.

Claims 1-8 and 10-20 stand rejected under § 103 as being unpatentable over Tom Negrino, "Sales-Automation Software," *Macworld*, v. 10, n. 10, pp. 144-48, October 1993 (hereinafter "Negrino") in view of Tony Seideman, "Way Cool! (Sales Force Automation)," *Sales & Marketing Management*, v. 146, n. 6, pp. 10-13, June 1994 (hereinafter "Seideman"), and further in view of John Hiatt, "Empowering the Global



Sales Force," *International Business*, v. 7, n. 9, pp. 16-20, September 1994 (hereinafter "Hiatt"). Negrino teaches a computer-based sales automation system that is used in a sales process. It is believed that Examiner asserts that Negrino further teaches a plurality of subsystems corresponding to steps in the sales process and facilitating the respective steps in the process. Applicants respectfully submit that the products described in Negrino are primarily directed to contact management, *e.g.*, management of client histories and scheduling apporintments. Negrino fails to teach or suggest integration of a plurality of subsystems into a single system for facilitating a sales process.

Moreover, it is respectfully asserted that the claimed invention infers occurrence of an event and a context in which the event occurred based at least in part on state changes in the system. It is believed that inferring the context suggests that a given event can occur in different contexts and that the system has the ability, based on the particular changes in state detected, to infer the particular context in which the event occurred. The system can also, based on the inferred context, facilitate an appropriate action to be performed during the sales process. By facilitating an action based on the context in which the event occurred, the system improves the efficiency with which a salesperson completes sales transactions.

Applicants believe that Negrino teaches systems that feature a linear progression from one step in a phase of the sales process to the next step in the phase. Accordingly, Negrino fails to adequately teach or suggest context-sensitive event recognition. While the present invention can handle sales processes characterized by a linear progression from one step to the next, it provides the additional ability to handle

non-linear sales processes in which a salesperson might not follow a predetermined sequence of steps. Salespeople can thereby conduct business with enhanced flexibility and versatility. It is respectfully asserted that context recognition, especially in combination with the integration of a plurality of subsystems corresponding to distinct phases of the sales process, significantly and advantageously enhances the usefulness of the claimed invention in facilitating business efforts in various phases of the sales process.

Accordingly, the claimed invention is neither taught nor suggested by, and is patentably distinct from, the prior art. Applicants respectfully request removal of the rejection of claim 1 under § 103. Claims 2-12 depend from claim 1 and further define particular features of various embodiments of the present invention over the prior art. Further, the combination of Negrino with Seideman, Hiatt, and/or Frye fails to teach or suggest the dependent claim embodiments because Negrino neither teaches nor suggests the claimed features discussed above. Applicants therefore also respectfully request that the rejection of these claims under § 103 be removed.

Claims 13-20 stand rejected under § 103 for reasons that appear to be similar to those discussed above in connection with claims 1-12. Applicants submit that the above discussion is equally applicable to claims 13-20 and request removal of the rejection of claims 13-20 under § 103.

New claims 21-43 further define various embodiments of the present invention over the prior art and are supported in the specification. Support for the subject matter claimed in claims 21-43 can be found, for example, from page 59, line 30 to page

61, line 7 and on page 63, lines 17-32. Accordingly, no new matter is asserted in new claims 21-43.

Applicants respectfully submit that the pending claims are in condition for allowance. A notice of allowance is respectfully requested.

Respectfully submitted,

Jerome Johnson et al.

By their agents
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John P. Sumner Reg. No. 29,114 JPS/AO



## UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. 087550, 089 10730795 JOHNSON J 7709, 72US01

LM21/0303

MERCHANT GOULD SMITH EDELL WELTER & SCHMIDT 3100 NORWEST CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS MN 55402-4131

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EXAMINER

DATE MAILED: 03/03/98

HUGHET, W

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/550,089	Applicant(s)	) Jerome D. John	son, et al.
	Examiner William N. Hughet		Group Art Unit 2761	
X Responsive to communication(s) filed on <u>Dec 10, 199</u>	7			<u> </u>
X This action is <b>FINAL</b> .				
Since this application is in condition for allowance exce in accordance with the practice under Ex parte Quayle	•	•	on as to the me	its is closed
A shortened statutory period for response to this action is is longer, from the mailing date of this communication. Frapplication to become abandoned. (35 U.S.C. § 133). Example 27 CFR 1.136(a).	ailure to respond withi	n the perio	d for response v	vill cause the
Disposition of Claims				
X Claim(s) <u>1-43</u>		is/are	pending in the a	application.
Of the above, claim(s)		is/are w	rithdrawn from o	consideration.
Claim(s)		i	s/are allowed.	
		i	s/are rejected.	
Claim(s)		i	s/are objected to	o.
Claims	are subjec	t to restrict	tion or election r	equirement.
<ul> <li>☐ The drawing(s) filed onOct 30, 1995 is/are</li> <li>☐ The proposed drawing correction, filed on</li> <li>☐ The specification is objected to by the Examiner.</li> <li>☐ The oath or declaration is objected to by the Examiner.</li> <li>☐ Priority under 35 U.S.C. § 119</li> <li>☐ Acknowledgement is made of a claim for foreign properties.</li> <li>☐ received.</li> <li>☐ received in Application No. (Series Code/Series received in this national stage application from *Certified copies not received:</li> <li>☐ Acknowledgement is made of a claim for domestic</li> </ul>	is appears is appears iority under 35 U.S.C. pies of the priority doc al Number) m the International Bu	§ 119(a)-( suments ha	ve been _ · Rule 17.2(a)).	·
		0.0.000		
Attachment(s)  Notice of References Cited, PTO-892 Information Disclosure Statement(s), PTO-1449, Pa Interview Summary, PTO-413 Notice of Draftsperson's Patent Drawing Review, Pinotice of Informal Patent Application, PTO-152	·			
SEE OFFICE ACTION	ON THE FOLLOWING	PAGES	- 1.00	